D 14

```
MMM         MMM     AAAAAAAAA        IIIIIIIII     LLL
MMM         MMM     AAAAAAAAA        IIIIIIIII     LLL
MMM         MMM     AAAAAAAAA        IIIIIIIII     LLL
MMMMMM   MMMMMM  AAA         AAA        III        LLL
MMMMMM   MMMMMM  AAA         AAA        III        LLL
MMMMMM   MMMMMM  AAA         AAA        III        LLL
MMM   MMM   MMM  AAA         AAA        III        LLL
MMM   MMM   MMM  AAA         AAA        III        LLL
MMM   MMM   MMM  AAA         AAA        III        LLL
MMM         MMM  AAA         AAA        III        LLL
MMM         MMM  AAA         AAA        III        LLL
MMM         MMM  AAA         AAA        III        LLL
MMM         MMM  AAAAAAAAAAAAAAA        III        LLL
MMM         MMM  AAAAAAAAAAAAAAA        III        LLL
MMM         MMM  AAAAAAAAAAAAAAA        III        LLL
MMM         MMM  AAA         AAA        III        LLL
MMM         MMM  AAA         AAA        III        LLL
MMM         MMM  AAA         AAA        III        LLL
MMM         MMM  AAA         AAA     IIIIIIIII     LLLLLLLLLLLLLLL
MMM         MMM  AAA         AAA     IIIIIIIII     LLLLLLLLLLLLLLL
MMM         MMM  AAA         AAA     IIIIIIIII     LLLLLLLLLLLLLLL
```

N 11

FILEID**NETSUBS

```
NN      NN  EEEEEEEEEE  TTTTTTTTTT    SSSSSSSS  UU      UU  BBPBBBBB      SSSSSSSS
NN      NN  EEEEEEEEEE  TTTTTTTTTT    SSSSSSSS  UU      UU  BBBBBBBB      SSSSSSSS
NN      NN  EE              TT      SS          UU      UU  BB      BB  SS
NN      NN  EE              TT      SS          UU      UU  BB      BB  SS
NNNN    NN  EE              TT      SS          UU      UU  BB      BB  SS
NNNN    NN  EE              TT      SS          UU      UU  BB      BB  SS
NN  NN  NN  EEEEEEEE        TT        SSSSSS    UU      UU  BBBBBBBB      SSSSSS
NN  NN  NN  EEEEEEEE        TT        SSSSSS    UU      UU  BBBBBBBB      SSSSSS
NN    NNNN  EE              TT              SS  UU      UU  BB      BB          SS
NN    NNNN  EE              TT              SS  UU      UU  BB      BB          SS
NN      NN  EE              TT              SS  UU      UU  BB      BB          SS     ....
NN      NN  EE              TT              SS  UU      UU  BB      BB          SS     ....
NN      NN  EEEEEEEEEE      TT      SSSSSSSS    UUUUUUUUUU  BBBBBBBB    SSSSSSSS       ....
NN      NN  EEEEEEEEEE      TT      SSSSSSSS    UUUUUUUUUU  BBBBBBBB    SSSSSSSS       ....

LL            IIIIII      SSSSSSSS
LL            IIIIII      SSSSSSSS
LL              II      SS
LL              II      SS
LL              II      SS
LL              II      SS
LL              II        SSSSSS
LL              II        SSSSSS
LL              II              SS
LL              II              SS
LL              II              SS
LL              II              SS
LLLLLLLLLL    IIIIII    SSSSSSSS
LLLLLLLLLL    IIIIII    SSSSSSSS
```

```
0 MODULE MAIL$NETSUBS (
0         IDENT = 'V04-000'
0                 ) =
1 BEGIN
1
1 !
1 !****************************************************************************
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1 !*                                                                          *
1 !****************************************************************************
1 !
1
1 !++
1 ! FACILITY:     VAX/VMS MAIL UTILITY
1 !
1 ! ABSTRACT:     Subroutines to speak to networks
1 !
1 ! ENVIRONMENT:  NATIVE/USER MODE
1 !
1 ! AUTHOR: Benn Schreiber, CREATION DATE: 10-Jul-1983
1 !
1 ! MODIFIED BY:
1 !
1 !
1 !       V03-015 ROP0030         Robert Posniak          24-JUL-1984
1 !               Allow VFC format files to be sent in
1 !               block mode.
1 !
1 !       V03-014 ROP0012         Robert Posniak          27-JUN-1984
1 !               Only send in block mode if input file has
1 !               variable length records.  Add check of
1 !               nodename for foreign protocol address
1 !               already exists test.
1 !
1 !       V03-013 ROP0001         Robert Posniak          24-MAY-1984
1 !               Check for oversized record when sending in record
1 !               mode.
1 !
1 !       V03-012 BLS0311         Benn Schreiber          1-MAY-1984
```

```
1 !                     Don't send 0-address to $qio.
1 !
1 !             V03-011 BLS0292         Benn Schreiber          29-MAR-1984
1 !                     Correct handling of alternate protocol per problems
1 !                     reported by Peter Lipman.  Complete attachment for MR.
1 !
1 !             V03-010 BLS0280         Benn Schreiber           4-MAR-1984
1 !                     Report errors in mail$get_input better.
1 !
1 !             V03-009 BLS0272         Benn Schreiber          18-FEB-1984 13:36:59
1 !                     Complete alternate protocol hooks. Use LIB$FIND_IMAGE_SYMBOL
1 !
1 !             V03-008 BLS0263         Benn Schreiber           4-FEB-1984
1 !                     Separate sending 0-end-of-username out into a routine
1 !                     so that slave mails that timeout on usernames don't timeout.
1 !
1 !             V03-007 BLS0255         Benn Schreiber          28-Dec-1983
1 !                     Convert to global flags.  Add routine to check addressee
1 !                     already in list.  If createlink is called for node already
1 !                     known dead, resignal the error for network master.  Insist
1 !                     on getting an ncb back in the mailbox.  mail$get_input now
1 !                     supports optional 3rd arg for output length.
1 !
1 !             V03-006 BLS0250         Benn Schreiber          12-Dec-1983
1 !                     Clear block mode flag in accept_link if error.
1 !
1 !             V03-005 BLS0246         Benn Schreiber          28-Nov-1983
1 !                     Allow ^C out of qio to access remote node.
1 !
1 !             V03-004 BLS0241         Benn Schreiber          27-Sep-1983
1 !                     Fix maxmsg and bufquo args to ASN_WTH_MBX.
1 !
1 !             V03-003 BLS0240         Benn Schreiber          15-Sep-1983
1 !                     Corrections to enable alternate net protocol.
1 !
1 !             V03-002 BLS0235         Benn Schreiber          23-Aug-1983
1 !                     Fix loop problem while searching for existing link, and
1 !                     ensure UBF set up correctly for sending messages.
1 !
1 !--
```

```
!
! INCLUDE FILES
!
    LIBRARY     'SYS$LIBRARY:STARLET';
    REQUIRE     'SRC$:MAILREQ';
    LIBRARY     'LIB$:MAILDEF';

EXTERNAL ROUTINE
    LIB$ASN_WTH_MBX,                        !Assign channel with mailbox
    LIB$GET_VM,                             !Allocate dynamic memory
    LIB$PUT_OUTPUT,                         !Output to SYS$OUTPUT
    LIB$SCOPY_R_DX,                         !String copy
    MAIL$ENABLE_CTRLC,                      !Enable main ctrl/c handling
    MAIL$DISABLE_CTRLC,                     ! and disable it
    MAIL$READ_ERROR_TEXT,                   !Read error text from slave and signal
    SMG$READ_COMPOSED_LINE,                 !SMG input routine
    SYS$FAOL,                               !Formatted ascii
    LIB$FIND_IMAGE_SYMBOL,                  !Image activate and return address
    UTIL$REPORT_IO_ERROR;                   !Report io error

EXTERNAL
    MAIL$SD_LNM_FILE_DEV,                   ! 'LNM$FILE_DEV'
    MAIL$G_CNCT : $BBLOCK,                  !Static cnct for inbound connects
    MAIL$Q_ATTDESC : $BBLOCK,               !Descriptor of attachment file spec
    MAIL$Q_INPTRAN : $BBLOCK,               !Descriptor of SYS$NET translation
    MAIL$Q_PROTOCOL : $BBLOCK,              !Descriptor of protocol if alt input
    MAIL$L_SMG_KEYTABLE,                    !SMG keytable index
    MAIL$L_SMG_KEYBOARD,                    !SMG keyboard index
    MAIL$W_TTCHAN : WORD,                   !Channel for terminal i/o
    MAIL$GL_SYSFLAGS : $BBLOCK,             !System-wide control flags
    MAIL$GL_FLAGS : $BBLOCK;                !control flags

EXTERNAL LITERAL
    SMG$_EOF;                               !End of file from SMG$ routines

OWN
    LINK_CHAN,                              !Channel for inbound logical link
    LINK_TFRADR,                            !Transfer address for alt prot. inb.
    LINK_CONTEXT,                           ! and it's context
    NETMBX_CHAN;                            !Network mailbox channel

GLOBAL
    MAIL$L_MBXBUF : LONG INITIAL(32),       !Size of mailbox buffer
    MAIL$L_MBXQUO : LONG INITIAL(96);       !Mailbox quota (3*mbxbuf)

BIND
    PROT_DESC = $DESCRIPTOR('MAIL$PROTOCOL') : $BBLOCK,           !..routine name
    X25_DESC = $DESCRIPTOR('PSIMAIL') : $BBLOCK,                  !X25 image
    NETACP_DESC = $DESCRIPTOR('_NET:') : $BBLOCK,           !For speaking to netacp
    LINK_DESC = $DESCRIPTOR('SYS$NET') : $BBLOCK,           !Logical we look for
    OBJECT_DESC = $DESCRIPTOR('::"MAIL=') : $BBLOCK,        !Remote mail object
    PREFIX_DESC = $DESCRIPTOR('MAIL$PROTOCOL_') : $BBLOCK,
    SD_MAJOR = $DESCRIPTOR('MAIL$C_PROT_MAJOR'),
    SD_MINOR = $DESCRIPTOR('MAIL$C_PROT_MINOR');

GLOBAL BIND
    MAIL$Q_OBJDESC = OBJECT_DESC;           !For debugging private object type
```

```
;   156         0300  1 !
;   157         0301  1 ! Define shared messages
;   158         0302  1 !
;   159       P 0303  1 $SHR_MSGDEF(MAIL,126,LOCAL,
;   160         0304  1         (READERR,ERROR));
```

```
1 GLOBAL ROUTINE MAIL$ADDR_EXISTS(PROT_DESC,NODE_DESC,USER_DESC,ADRLST) =
1 !+++
1 ! FUNCTIONAL DESCRIPTION:
1 !
1 !       Check whether the named addresseo is already in the list.
1 !       Return true if found, false if not.
1 !
1 ! Inputs:
1 !
1 !       prot_desc = address of protocol descriptor
1 !       node_desc = address of nodename descriptor
1 !       user_desc = address of username descriptor
1 !       adrlst = address of address list listhead
1 !---
2 BEGIN
2 MAP
2     PROT_DESC : REF $BBLOCK,
2     NODE_DESC : REF $BBLOCK,
2     USER_DESC : REF $BBLOCK,
2     ADRLST : REF VECTOR[2,LONG];
2
2 LOCAL
2     DESC : VECTOR[2,LONG],
2     ADR : REF $BBLOCK,
2     LNK : REF $BBLOCK;
2
2 ADR = .ADRLST[0];
2 !
2 ! Loop through the addressee list
2 !
2 WHILE .ADR NEQ ADRLST[0]
3 DO BEGIN
3 !
3 ! First check the username
3 !
3     IF CH$EQL(.USER_DESC[DSC$W_LENGTH],.USER_DESC[DSC$A_POINTER],
3             .ADR[ADR_B_NAM[NG],ADR[ADR_T_NAME])
4     THEN BEGIN
4         LNK = .ADR[ADR_L_LLNK];
4 !
4 ! If protocol and node are 0, and this entry has no LNK pointer, then
4 ! this is a match
4 !
5         IF (.PROT_DESC[DSC$W_LENGTH] EQL 0)
5             AND (.NODE_DESC[DSC$W_LENGTH] EQL 0)
5             AND (.LNK EQL 0)
4             THEN RETURN TRUE;
4         IF .PROT_DESC[DSC$W_LENGTH] EQL 0
5         THEN BEGIN
5 !
5 ! Same nodename is a match
5 !
6             IF (.LNK NEQ 0)
6                 AND (.LNK[LNK_B_PNLEN] EQL 0)
5                 THEN IF CH$EQ[(.NODE_DESC[DSC$W_LENGTH],.NODE_DESC[DSC$A_POINTER],
5                         .LNK[LNK_B_NODLEN],LNK[[NK_T_NODE])
5                 THEN RETURN TRUE;
```

```
;  219          0362  5              END
;  220          0363  5            !
;  221          0364  5            ! If foreign protocol, check protocol name and node name
;  222          0365  5            !
;  223          0366  4            ELSE IF (.LNK NEQ 0) AND (.LNK[LNK_B_PNLEN] NEQ 0) THEN
;  224          0367  4                IF CH$EQL(.PROT_DESC[DSC$W_LENGTH],
;  225          0368  4                    .PROT_DESC[DSC$A_POINTER],.LNK[LNK_B_PNLEN],LNK[LNK_T_PNAM])
;  226          0369  4                AND CH$EQL(.NODE_DESC[DSC$W_LENGTH],.NODE_DESC[DSC$A_POINTER],
;  227          0370  4                    .LNK[LNK_B_NODLEN],LNK[LNK_T_NODE])
;  228          0371  4                                                     THEN RETURN TRUE;
;  229          0372  3            END;
;  230          0373  3        ADR = .ADR[ADR_L_FLINK];                    !Move along the list
;  231          0374  2        END;
;  232          0375  2  RETURN FALSE
;  233          0376  1  END;


                                                                   .TITLE  MAIL$NETSUBS
                                                                   .IDENT  \V04-000\

                                                                   .PSECT  $CODE$,NOWRT,2

   4C 4F 43 4F 54 4F 52 50 24 4C 49 41 4D  00000 P.AAB:  .ASCII  \MAIL$PROTOCOL\                    ;
                                           0000D         .BLKB   3
                                 0000000D  00010 P.AAA:  .LONG   13                                 ;
                                 00000000' 00014         .ADDRESS P.AAB                             ;
                     4C 49 41 4D 49 53 50  00018 P.AAD:  .ASCII  \PSIMAIL\                          ;
                                           0001F         .BLKB   1
                                 00000007  00020 P.AAC:  .LONG   7                                  ;
                                 00000000' 00024         .ADDRESS P.AAD                             ;
                           3A 54 45 4E 5F  00028 P.AAF:  .ASCII  \_NET:\                            ;
                                           0002D         .BLKB   3
                                 00000005  00030 P.AAE:  .LONG   5                                  ;
                                 00000000' 00034         .ADDRESS P.AAF                             ;
                     54 45 4E 24 53 59 53  00038 P.AAH:  .ASCII  \SYS$NET\                          ;
                                           0003F         .BLKB   1
                                 00000007  00040 P.AAG:  .LONG   7                                  ;
                                 00000000' 00044         .ADDRESS P.AAH                             ;
                  3D 4C 49 41 4D 22 3A 3A  00048 P.AAJ:  .ASCII  \::"MAIL=\                         ;
                                 00000008  00050 P.AAI:  .LONG   8                                  ;
                                 00000000' 00054         .ADDRESS P.AAJ                             ;
5F 4C 4F 43 4F 54 4F 52 50 24 4C 49 41 4D  00058 P.AAL:  .ASCII  \MAIL$PROTOCOL_\                   ;
                                           00066         .BLKB   2
                                 0000000E  00068 P.AAK:  .LONG   14                                 ;
                                 00000000' 0006C         .ADDRESS P.AAL                             ;
4A 41 4D 5F 54 4F 52 50 5F 43 24 4C 49 41 4D  00070 P.AAN:  .ASCII  \MAIL$C_PROT_MAJOR\             ;
                                    52 4F  0007F                                                    ;
                                           00081         .BLKB   3
                                 00000011  00084 P.AAM:  .LONG   17                                 ;
                                 00000000' 00088         .ADDRESS P.AAN                             ;
4E 49 4D 5F 54 4F 52 50 5F 43 24 4C 49 41 4D  0008C P.AAP:  .ASCII  \MAIL$C_PROT_MINOR\             ;
                                    52 4F  0009B                                                    ;
                                           0009D         .BLKB   3
                                 00000011  000A0 P.AAO:  .LONG   17                                 ;
                                 00000000' 000A4         .ADDRESS P.AAP                             ;

                                                         .PSECT  $OWN$,NOEXE,2
```

```
                                                           00000 LINK_CHAN:
                                                                         .BLKB    4
                                                           00004 LINK_TFRADR:
                                                                         .BLKB    4
                                                           00008 LINK_CONTEXT:
                                                                         .BLKB    4
                                                           0000C NETMBX_CHAN:
                                                                         .BLKB    4

                                                                         .PSECT   $GLOBAL$,NOEXE,2

                                                  00000020 00000 MAIL$L_MBXBUF::
                                                                         .LONG    32                                          ;
                                                  00000060 00004 MAIL$L_MBXQUO::
                                                                         .LONG    96                                          ;

                                                                 PROT_DESC=           P.AAA
                                                                 X25_DESC=            P.AAC
                                                                 NETACP_DESC=         P.AAE
                                                                 LINK_DESC=           P.AAG
                                                                 OBJECT_DESC=         P.AAI
                                                                 PREFIX_DESC=         P.AAK
                                                                 SD_MAJOR=            P.AAM
                                                                 SD_MINOR=            P.AAO
                                                                 MAIL$Q_OBJDESC==     P.AAI
                                                                         .EXTRN   LIB$ASN_WTH_MBX
                                                                         .EXTRN   LIB$GET_VM, LIB$PUT_OUTPUT
                                                                         .EXTRN   LIB$SCOPY_R_DX, MAIL$ENABLE_CTRLC
                                                                         .EXTRN   MAIL$DISABLE_CTRLC
                                                                         .EXTRN   MAIL$READ_ERROR_TEXT
                                                                         .EXTRN   SMG$READ_COMPOSED_LINE
                                                                         .EXTRN   SYS$FAOL, LIB$FIND_IMAGE_SYMBOL
                                                                         .EXTRN   UTIL$REPORT_IO_ERROR
                                                                         .EXTRN   MAIL$SD_LNM_FILE_DEV
                                                                         .EXTRN   MAIL$G_CNCT, MAIL$Q_ATTDESC
                                                                         .EXTRN   MAIL$Q_INPTRAN, MAIL$Q_PROTOCOL
                                                                         .EXTRN   MAIL$L_SMG_KEYTABLE
                                                                         .EXTRN   MAIL$L_SMG_KEYBOARD
                                                                         .EXTRN   MAIL$W_TTCHAN, MAIL$GL_SYSFLAGS
                                                                         .EXTRN   MAIL$GL_FLAGS, SMG$_EOF

                                                                         .PSECT   $CODE$,NOWRT,2

                                                       007C 00000        .ENTRY   MAIL$ADDR_EXISTS, Save R2,R3,R4,R5,R6      ; 0305
                                   5E            08     C2 00002         SUBL2    #8, SP                                     ;
                                   55      10    BC     D0 00005         MOVL     @ADRLST, ADR                               ; 0331
                                   56      0C    AC     D0 00009         MOVL     USER_DESC, R6                              ; 0340
                           10      AC            55     D1 0000D 1$:     CMPL     ADR, ADRLST                                ; 0335
                                                 66     13 00011         BEQL     7$                                         ;
                                   50      1D    A5     9A 00013         MOVZBL   29(ADR), R0                                ; 0341
        50          00      04     B6      CC    BC     2D 00017         CMPC5    @USER_DESC, @4(R6), #0, R0, 30(ADR)        ;
                                           1E    A5        0001E                                                            ;
                                                 52     12 00020         BNEQ     6$                                         ;
                                   54      08    A5     D0 00022         MOVL     8(ADR), LNK                                ; 0343
                                   51      04    AC     D0 00026         MOVL     PROT_DESC, R1                              ; 0348
                                                 50     D4 0002A         CLRL     R0                                         ;
```

```
                                            61 B5 0002C         TSTW    (R1)                                  ;
                                            0B 12 0002E         BNEQ    2$                                    ;
                                            50 D6 00030         INCL    R0                                    ;
                                        08  BC B5 00032         TSTW    @NODE_DESC                            ; 0349
                                            04 12 00035         BNEQ    2$                                    ;
                                            54 D5 00037         TSTL    LNK                                   ; 0350
                                            35 13 00039         BEQL    5$                                    ;
                                09          50 E9 0003B  2$:    BLBC    R0, 3$                                ; 0357
                                            54 D5 0003E         TSTL    LNK                                   ;
                                            32 13 00040         BEQL    6$                                    ;
                                        4F  A4 95 00042         TSTB    79(LNK)                               ; 0358
                                            15 11 00045         BRB     4$                                    ;
                                            54 D5 00047  3$:    TSTL    LNK                                   ; 0366
                                            29 13 00049         BEQL    6$                                    ;
                                        4F  A4 95 0004B         TSTB    79(LNK)                               ;
                                            24 13 0004E         BEQL    6$                                    ;
                                50      4F  A4 9A 00050         MOVZBL  79(LNK), R0                           ; 0368
        50          00      04  B1          61 2D 00054         CMPC5   (R1), @4(R1), #0, R0, 80(LNK)         ;
                                        50  A4    0005A                                                       ;
                                            16 12 0005C  4$:    BNEQ    6$                                    ;
                                50      08  AC D0 0005E         MOVL    NODE_DESC, R0                         ; 0369
                                51      2F  A4 9A 00062         MOVZBL  47(LNK), R1                           ; 0370
        51          00      04  B0          60 2D 00066         CMPC5   (R0), @4(R0), #0, R1, 48(LNK)         ;
                                        30  A4    0006C                                                       ;
                                            04 12 0006E         BNEQ    6$                                    ;
                                50          01 D0 00070  5$:    MOVL    #1, R0                                ; 0371
                                               04 00073         RET                                           ;
                                55          65 D0 00074  6$:    MOVL    (ADR), ADR                            ; 0373
                                            94 11 00077         BRB     1$                                    ; 0335
                                            50 D4 00079  7$:    CLRL    R0                                    ; 0375
                                               04 0007B         RET                                           ; 0376

; Routine Size:  124 bytes,    Routine Base:  $CODE$ + 00A8
;  235          0377   1 ROUTINE CTRLCAST (LNKDESC) =
;  236          0378   1 !+++
;  237          0379   1 ! FUNCTIONAL DESCRIPTION:
;  238          0380   1 !
;  239          0381   1 !       Entered when a CTRL/C is detected while attempting connect to
;  240          0382   1 !       remote node.
;  241          0383   1 !---
;  242          0384   2 BEGIN
;  243          0385   2 MAP
;  244          0386   2     LNKDESC : REF $BBLOCK;
;  245          0387   2
;  246          0388   2 LOCAL
;  247          0389   2     DESC : VECTOR[2,LONG];
;  248          0390   2
;  249          0391   2 !
;  250          0392   2 ! Cancel network access qio, then fix up ctrl/c handler
;  251          0393   2 !
;  252          0394   2 $CANCEL(CHAN=.LNKDESC[LNK_W_CHAN]);
;  253          0395   2 LNKDESC[LNK_V_DEAD] = TRUE;
;  254          0396   2
;  255          0397   2 IF .MAIL$GL_FLAGS[MAIF_V_ITERM]
;  256          0398   3 THEN BEGIN
;  257          0399   3     $CANCEL(CHAN=.MAIL$W_TTCHAN);        !Cancel our ctrl/c ast
;  258          0400   3     MAIL$ENABLE_CTRLC();                 !and enable main one
;  259          0401   2     END;
;  260          0402   2
;  261          0403   2 DESC[0] = .LNKDESC[LNK_B_NODLEN];
;  262          0404   2 DESC[1] = LNKDESC[LNK_T_NODE];
;  263          0405   2 SIGNAL(MAIL$_CONABORT,1,DESC,MAIL$_SENDABORT);  !Signal and unwind
;  264          0406   2
;  265          0407   2 RETURN 1
;  266          0408   1 END;


                                                      .EXTRN  SYS$CANCEL

                                   000C 00000 CTRLCAST:
                                                      .WORD   Save R2,R3                                 ; 0377
                   53 00000000G  00   9E 00002        MOVAB   SYS$CANCEL, R3                             :
                   5E            08   C2 00009        SUBL2   #8, SP                                     :
                   52         04 AC   D0 0000C        MOVL    LNKDESC, R2                                ; 0394
                   7E         2C A2   3C 00010        MOVZWL  44(R2), -(SP)                              :
                   63            01   FB 00014        CALLS   #1, SYS$CANCEL                             :
             2E    A2            02   88 00017        BISB2   #2, 46(R2)                                 ; 0395
   11 00000000G    00            02   E1 0001B        BBC     #2, MAIL$GL_FLAGS, 1$                      ; 0397
                   7E 00000000G  00   3C 00023        MOVZWL  MAIL$W_TTCHAN, -(SP)                       ; 0399
                   63            01   FB 0002A        CALLS   #1, SYS$CANCEL                             :
      00000000G    00            00   FB 0002D        CALLS   #0, MAIL$ENABLE_CTRLC                      ; 0400
                   6E         2F A2   9A 00034 1$:    MOVZBL  47(R2), DESC                               ; 0403
             04    AE         30 A2   9E 00038        MOVAB   48(R2), DESC+4                             ; 0404
                      007E805A   8F   DD 0003D        PUSHL   #8290394                                   ; 0405
                            04   AE   9F 00043        PUSHAB  DESC                                       :
                                 01   DD 00046        PUSHL   #1                                         :
                      007E8112   8F   DD 00048        PUSHL   #8290578                                   :
      00000000G    00            04   FB 0004E        CALLS   #4, LIB$SIGNAL                             :
                   50            01   D0 00055        MOVL    #1, R0                                     ; 0407
```

```
                                           04 00058          RET                                                     ; 0408

; Routine Size:  89 bytes,    Routine Base:  $CODE$ + 0124
;   268             0409  1 ROUTINE SEND_STRING (DESC) =
;   269             0410  1 !++
;   270             0411  1 ! FUNCTIONAL DESCRIPTION:
;   271             0412  1 !
;   272             0413  1 !        Write string to SYS$OUTPUT
;   273             0414  1 !
;   274             0415  1 !--
;   275             0416  2 BEGIN
;   276             0417  2
;   277             0418  2 LIB$PUT_OUTPUT(.DESC);
;   278             0419  2 RETURN 0
;   279             0420  1 END;


                                                  0000 00000 SEND_STRING:
                                                                       .WORD    Save nothing                                   ; 0409
                                            04    AC   DD 00002        PUSHL    DESC                                           ; 0418
                      00000000G  00               01   FB 00005        CALLS    #1, LIB$PUT_OUTPUT                             ;
                                                  50   D4 0000C        CLRL     R0                                             ; 0419
                                                       04 0000E        RET                                                     ; 0420

; Routine Size:  15 bytes,    Routine Base:  $CODE$ + 017D
```

```
                                                            M 12
MAILSNETSUBS                                         16-Sep-1984 01:10:58    VAX-11 Bliss-32 V4.0-742                  Page  12
V04-000                                              14-Sep-1984 12:42:29    DISK$VMSMASTER:[MAIL.SRC]NETSUBS.B32;1     (6)

;    281          0421  1  GLOBAL ROUTINE MAIL$PRUNW_HANDLER (SIGARG,MECHARG) =
;    282          0422  1  !++
;    283          0423  1  ! FUNCTIONAL DESCRIPTION:
;    284          0424  1  !
;    285          0425  1  !       General handler to print message w/putmsg and then unwind if
;    286          0426  1  !       the signal is MAIL$_CONABORT
;    287          0427  1  !--
;    288          0428  2  BEGIN
;    289          0429  2  MAP
;    290          0430  2      SIGARG : REF $BBLOCK,
;    291          0431  2      MECHARG : REF $BBLOCK;
;    292          0432  2
;    293          0433  2  BIND
;    294          0434  2      SIGNAME = SIGARG[CHF$L_SIG_NAME] : $BBLOCK;
;    295          0435  2
;    296          0436  2  IF .SIGNAME EQL SS$_UNWIND
;    297          0437  2      THEN RETURN SS$_CONTINUE;
;    298          0438  2
;    299          0439  2  IF .SIGNAME NEQ MAIL$_CONABORT
;    300          0440  2      THEN RETURN SS$_RESIGNAL;
;    301          0441  2
;    302          0442  2  IF NOT .SIGNAME
;    303          0443  3  THEN BEGIN
;    304          0444  3      MECHARG[CHF$L_MCH_SAVR0] = .SIGNAME;
;    305          0445  3      SIGARG[CHF$L_SIG_ARGS] = .SIGARG[CHF$L_SIG_ARGS] - 2;
;    306        P 0446  3      $PUTMSG(MSGVEC=SIGARG[CHF$L_SIG_ARGS],
;    307          0447  3              ACTRTN = SEND_STRING);
;    308          0448  3      SIGARG[CHF$L_SIG_ARGS] = .SIGARG[CHF$L_SIG_ARGS] + 2;
;    309          0449  3      SIGNAME[STS$V_SEVERITY] = STS$K_WARNING;
;    310          0450  2      END;
;    311          0451  2
;    312          0452  2  SETUNWIND();
;    313          0453  2  RETURN 0
;    314          0454  1  END;


                                                                 .EXTRN   SYS$PUTMSG

                                             0004 00000          .ENTRY   MAIL$PRUNW_HANDLER, Save R2                          ; 0421
                        52        04    AC    D0 00002           MOVL     SIGARG, R2                                           ; 0434
              00000920  8F        04    A2    D1 0C006           CMPL     4(R2), #2336                                         ; 0436
                                        04    12 0000E           BNEQ     1$                                                   ;
                        50              01    D0 00010           MOVL     #1, R0                                               ; 0437
                                              04 00013           RET                                                           ;
              007E8112  8F        04    A2    D1 00014  1$:      CMPL     4(R2), #8290578                                      ; 0439
                                        06    13 0001C           BEQL     2$                                                   ;
                        50      0918    8F    3C 0001E           MOVZWL   #2328, R0                                            ; 0440
                                              04 00023           RET                                                           ;
                        21        04    A2    E8 00024  2$:      BLBS     4(R2), 3$                                            ; 0442
                        50        08    AC    D0 00028           MOVL     MECHARG, R0                                          ; 0444
                    0C  A0        04    A2    D0 0002C           MOVL     4(R2), 12(R0)                                        ;
                        62              02    C2 00031           SUBL2    #2, (R2)                                             ; 0445
                                        7E    7C 00034           CLRQ     -(SP)                                                ; 0447
                                  B8    AF    9F 00036           PUSHAB   SEND_STRING                                          ;
                                        52    DD 00039           PUSHL    R2                                                   ;
             00000000G  00              04    FB 0003B           CALLS    #4, SYS$PUTMSG                                       ;
```

```
                      62          02  C0 00042          ADDL2   #2, (R2)                                    ; 0448
                 04   A2          07  8A 00045          BICB2   #7, 4(R2)                                   ; 0449
                                  7E  7C 00049 3$:      CLRQ    -(SP)                                       ; 0452
          00000000G   00          02  FB 0004B          CALLS   #2, SYS$UNWIND                              ;
                                  50  D4 00052          CLRL    R0                                          ; 0453
                                      04 00054          RET                                                 ; 0454

; Routine Size:  85 bytes,    Routine Base:  $CODE$ + 018C
;  316          0455  1 ROUTINE ACCESS_NODE(LNKDESC, CNCTDESC, ALTOBJ_DESC) =
;  317          0456  1 !+++
;  318          0457  1 ! FUNCTIONAL DESCRIPTION:
;  319          0458  1 !
;  320          0459  1 !       Perform the access qio.
;  321          0460  1 !
;  322          0461  1 ! INPUTS:
;  323          0462  1 !
;  324          0463  1 !       lnkdesc = address of lnk descriptor block
;  325          0464  1 !       cnctdesc = address of cnct block
;  326          0465  1 !
;  327          0466  1 !--
;  328          0467  2 BEGIN
;  329          0468  2
;  330          0469  2 MAP
;  331          0470  2     LNKDESC : REF $BBLOCK,
;  332          0471  2     CNCTDESC : REF $BBLOCK,
;  333          0472  2     ALTOBJ_DESC : REF $BBLOCK;
;  334          0473  2
;  335          0474  2 BUILTIN
;  336          0475  2     NULLPARAMETER;
;  337          0476  2
;  338          0477  2 LOCAL
;  339          0478  2     STATUS,
;  340          0479  2     DESC : VECTOR[2,LONG],
;  341          0480  2     CNFREC : $BBLOCK[CNF_C_LENGTH],
;  342          0481  2     PTR : REF VECTOR[,BYTE],
;  343          0482  2     PTR1 : REF VECTOR[,BYTE],
;  344          0483  2     IOSB : VECTOR[4,WORD];
;  345          0484  2
;  346          0485  2 BIND
;  347          0486  2     TMPBUF = MAIL$G_CNCT[CNCT_T_BUFFER] : $BBLOCK,
;  348          0487  2     TMPWORD = TMPBUF : VECTOR[,WORD],
;  349          0488  2     TMPBYTE = TMPBUF : VECTOR[,BYTE];
;  350          0489  2
;  351          0490  2 IF .MAIL$GL_FLAGS[MAIF_V_ITERM]
;  352          0491  2     AND .MAIL$W_TTCHAN NEQ 0
;  353          0492  3 THEN BEGIN
;  354          0493  3     MAIL$DISABLE_CTRLC();
;  355        P 0494  3     IF_ERR($QIOW(CHAN=.MAIL$W_TTCHAN,
;  356        P 0495  3                 FUNC=IO$_SETMODE OR IO$M_CTRLCAST,
;  357        P 0496  3                 IOSB=IOSB,
;  358        P 0497  3                 P1=CTRLCAST,
;  359        P 0498  3                 P2=.LNKDESC),
;  360          0499  3             SIGNAL(.STATUS));
;  361          0500  3     IF NOT .IOSB[0]
;  362          0501  3         THEN SIGNAL(.IOSB[0]);
;  363          0502  2     END;
;  364          0503  2 !
;  365          0504  2 ! Set up configuration record
;  366          0505  2 !
;  367          0506  2 CNFREC[CNF_B_VERSION] = CNF_C_VERS;
;  368          0507  2 CNFREC[CNF_B_ECO] = CNF_C_ECO;
;  369          0508  2 CNFREC[CNF_B_CUSTECO] = 0;
;  370          0509  2 CNFREC[CNF_B_OS] = CNF_C_VAXVMS;
;  371          0510  2 CNFREC[CNF_L_OPTIONS] = 0;
;  372          0511  2 CNFREC[CNF_B_RFM] = .CNCTDESC[CNCT_B_FILRFM]; !Record format
```

```
  2 CNFREC[CNF_B_RAT] = .CNCTDESC[CNCT_B_FILRAT]; ! and attributes
  2 !
  2 ! We want to send in block mode only if the input file has var len records
  2 ! or VFC format
  2 !
  2 CNFREC[CNF_L_IOMODE] = 0;
  3 IF ((.CNFREC[CNF_B_RFM] EQL FAB$C_VAR) OR (.CNFREC[CNF_B_RFM] EQL FAB$C_VFC))
  2     THEN CNFREC[CNF_L_IOMODE] = CNF_M_BLKSEND;
  2 CNFREC[CNF_B_SPARE1] = 0;
  2 CNFREC[CNF_B_SPARE2] = 0;
  2 !
  2 ! Set up the ncb.  the format is:
  2 !       NODE::'MAIL=/<word of 0><count><'count' bytes><16 - 'count' 0's>"
  2 !
  2 PTR = CH$MOVE(.LNKDESC[LNK_B_NODLEN],LNKDESC[LNK_T_NODE],TMPBUF);
  2 IF NULLPARAMETER(3)
  2 THEN PTR = CH$MOVE(.OBJECT_DESC[DSC$W_LENGTH],.OBJECT_DESC[DSC$A_POINTER],.PTR)
  2 ELSE PTR = CH$MOVE(.ALTOBJ_DESC[DSC$W_LENGTH],
  2                         .ALTOBJ_DESC[DSC$A_POINTER],.PTR);
  2 PTR[0] = %C'/';
  2 PTR = PTR[1];
  2 PTR[0] = PTR[1] = 0;     !Create word of 0
  2 PTR = PTR[2];
  2 PTR[0] = CNF_C_LENGTH;  !Set length of configuration data
  2 PTR = PTR[1];
  2 PTR = CH$MOVE(CNF_C_LENGTH,CNFREC,.PTR); !move configuration data
L 2 %IF 16-CNF_C_LENGTH GTRU 0
U 2 %THEN
U 2     PTR = CH$FILL(0,16-CNF_C_LENGTH,.PTR);                 !Fill rest with 0s'
  2 %FI
  2 PTR[0] = %C'"';                                       !And a closing quotes
  2 PTR = PTR[1];
  2 DESC[0] = .PTR - TMPBUF;                              !Create descriptor of NCB
  2 DESC[1] = TMPBUF;
  2 !
  2 ! Do Access qio
  2 !
P 2 STATUS = $QIOW(FUNC=IO$_ACCESS,
P 2                 CHAN=.LNKDESC[LNK_W_CHAN],
P 2                 IOSB=IOSB,
  2                 P2=DESC);
  2
  2 IF .STATUS
  2     THEN STATUS = .IOSB[0];
  2
  2 IF .MAIL$GL_FLAGS[MAIF_V_ITERM]
  2     AND .MAIL$W_TTCHAN NEQ 0
  3 THEN BEGIN
  3     $CANCEL(CHAN=.MAIL$W_TTCHAN);       !Cancel our ctrl/c ast
  3     MAIL$ENABLE_CTRLC();                !and enable main one
  2     END;
  2
  2 RETURN .STATUS
  1 END;
```

```
                                                            .EXTRN  SYS$QIOW

                                        0FFC 00000 ACCESS_NODE:
                                                            .WORD   Save R2,R3,R4,R5,R6,R7,R8,R9,R10,R11        ; 0455
                    5B 00000000G  00   9E 00002            MOVAB   LIB$SIGNAL, R11                             ;
                    5A 00000000G  00   9E 00009            MOVAB   SYS$QIOW, R10                               ;
                    59 00000000G  00   9E 00010            MOVAB   TMPBUF, R9                                  ;
                    58      FF28  CF   9E 00017            MOVAB   CTRLCAST, R8                                ;
                    57 00000000G  00   9E 0001C            MOVAB   MAIL$W_TTCHAN, R7                           ;
                    5E            20   C2 00023            SUBL2   #32, SP                                     ;
      37 00000000G  00            02   E1 00026            BBC     #2, MAIL$GL_FLAGS, 2$                       ; 0490
                                  67   B5 0002E            TSTW    MAIL$W_TTCHAN                               ; 0491
                                  33   13 00030            BEQL    2$                                          ;
         00000000G  00            00   FB 00032            CALLS   #0, MAIL$DISABLE_CTRLC                      ; 0493
                                  7E   7C 00039            CLRQ    -(SP)                                       ; 0499
                                  7E   7C 0003B            CLRQ    -(SP)                                       ;
                           04     AC   DD 0003D            PUSHL   LNKDESC                                     ;
                                  58   DD 00040            PUSHL   R8                                          ;
                                  7E   7C 00042            CLRQ    -(SP)                                       ;
                           20     AE   9F 00044            PUSHAB  IOSB                                        ;
                    7E   0123     8F   3C 00047            MOVZWL  #291, -(SP)                                 ;
                    7E            67   3C 0004C            MOVZWL  MAIL$W_TTCHAN, -(SP)                        ;
                                  7E   D4 0004F            CLRL    -(SP)                                       ;
                    6A            0C   FB 00051            CALLS   #12, SYS$QIOW                               ;
                    05            50   E8 00054            BLBS    STATUS, 1$                                  ;
                                  50   DD 00057            PUSHL   STATUS                                      ;
                    6B            01   FB 00059            CALLS   #1, LIB$SIGNAL                              ;
                    06            6E   E8 0005C 1$:        BLBS    IOSB, 2$                                    ; 0500
                    7E            6E   3C 0005F            MOVZWL  IOSB, -(SP)                                 ; 0501
                    6B            01   FB 00062            CALLS   #1, LIB$SIGNAL                              ;
              08    AE 07000003   8F   D0 00065 2$:        MOVL    #117440515, CNFREC                          ; 0506
                    50        08  AC   D0 0006D            MOVL    CNCTDESC, R0                                ; 0511
              14    AE      0081  C0   90 00071            MOVB    129(R0), CNFREC+12                          ;
              15    AE      0080  C0   90 00077            MOVB    128(R0), CNFREC+13                          ; 0512
                              0C  AE   7C 0007D            CLRQ    CNFREC+4                                    ; 0510
                    02        14  AE   91 00080            CMPB    CNFREC+12, #2                               ; 0518
                                  06   13 00084            BEQL    3$                                          ;
                    03        14  AE   91 00086            CMPB    CNFREC+12, #3                               ;
                                  04   12 0008A            BNEQ    4$                                          ;
              10    AE            01   D0 0008C 3$:        MOVL    #1, CNFREC+8                                ; 0519
                              16  AE   B4 00090 4$:        CLRW    CNFREC+14                                   ; 0520
                    56        04  AC   D0 00093            MOVL    LNKDESC, R6                                 ; 0526
                    50        2F  A6   9A 00097            MOVZBL  47(R6), R0                                  ;
      69      30    A6            50   28 0009B            MOVC3   R0, 48(R6), TMPBUF                          ;
                    03            6C   91 000A0            CMPB    (AP), #3                                    ; 0527
                                  05   1F 000A3            BLSSU   5$                                          ;
                              0C  AC   D5 000A5            TSTL    12(AP)                                      ;
                                  0D   12 000A8            BNEQ    6$                                          ;
                    50      FDC5  CF   D0 000AA 5$:        MOVL    OBJECT_DESC+4, R0                           ; 0528
      63            60      FDBC  CF   28 000AF            MOVC3   OBJECT_DESC, (R0), (PTR)                    ;
                                  09   11 000B5            BRB     7$                                          ;
                    50        0C  AC   D0 000B7 6$:        MOVL    ALTOBJ_DESC, R0                             ; 0529
      63      04    B0            60   28 000BB            MOVC3   (R0), 4(R0), (PTR)                          ; 0530
                    83            2F   90 000C0 7$:        MOVB    #47, (PTR)+                                 ; 0531
                                  83   B4 000C3            CLRW    (PTR)+                                      ; 0533
                    83            10   90 000C5            MOVB    #16, (PTR)+                                 ; 0535
      63      08    AE            10   28 000C8            MOVC3   #16, CNFREC, (PTR)                          ; 0537
```

```
                         83           22  90 000CD           MOVB    #34, (PTR)+                              ; 0542
                         50           69  9E 000D0           MOVAB   TMPBUF, R0                               ; 0544
          18   AE        53           50  C3 000D3           SUBL3   R0, PTR, DESC                            ;
                    1C   AE           69  9E 000D8           MOVAB   TMPBUF, DESC+4                           ; 0545
                         7E           7C 000DC               CLRQ    -(SP)                                    ; 0552
                         7E           7C 000DE               CLRQ    -(SP)                                    ;
                               28     AE  9F 000E0           PUSHAB  DESC                                     ;
                                      7E  7C 000E3           CLRQ    -(SP)                                    ;
                                      7E  D4 000E5           CLRL    -(SP)                                    ;
                               20     AE  9F 000E7           PUSHAB  IOSB                                     ;
                                      32  DD 000EA           PUSHL   #50                                      ;
                         7E    2C     A6  3C 000EC           MOVZWL  44(R6), -(SP)                            ;
                                      7E  D4 000F0           CLRL    -(SP)                                    ;
                         6A           0C  FB 000F2           CALLS   #12, SYS$QIOW                            ;
                         52           50  D0 000F5           MOVL    R0, STATUS                               ;
                         03           52  E9 000F8           BLBC    STATUS, 8$                               ; 0554
                         52           6E  3C 000FB           MOVZWL  IOSB, STATUS                             ; 0555
          15 00000000G   00           02  E1 000FE 8$:       BBC     #2, MAIL$GL_FLAGS, 9$                    ; 0557
                                      67  B5 00106           TSTW    MAIL$W_TTCHAN                            ; 0558
                                      11  13 00108           BEQL    9$                                       ;
                         7E           67  3C 0010A           MOVZWL  MAIL$W_TTCHAN, -(SP)                     ; 0560
             00000000G   00           01  FB 0010D           CALLS   #1, SYS$CANCEL                           ;
             00000000G   00           00  FB 00114           CALLS   #0, MAIL$ENABLE_CTRLC                    ; 0561
                         50           52  D0 0011B 9$:       MOVL    STATUS, R0                               ; 0564
                                          04 0011E           RET                                              ; 0565

; Routine Size:  287 bytes,    Routine Base:  $CODE$ + 01E1
```

```
:   428            0566  1 ROUTINE CHECK_PROTOCOL_VERSION (IMAGE_DESC) =
:   429            0567  1 !++
:   430            0568  1 ! FUNCTIONAL DESCRIPTION:
:   431            0569  1 !
:   432            0570  1 !       Ensure that the symbols MAIL$C_PROT_MAJOR and MAIL$C_PROT_MINOR
:   433            0571  1 !       are defined, and that they have acceptable values
:   434            0572  1 !
:   435            0573  1 !--
:   436            0574  2 BEGIN
:   437            0575  2
:   438            0576  2 LOCAL
:   439            0577  2     MAJOR_P,
:   440            0578  2     MINOR_P;
:   441            0579  2
:   442          P 0580  2 IF_ERR(LIB$FIND_IMAGE_SYMBOL(.IMAGE_DESC,SD_MAJOR,MAJOR_P);,
:   443            0581  2         RETURN .STATUS);
:   444            0582  2 IF .MAJOR_P NEQ 1
:   445            0583  2     THEN RETURN SIGNAL(MAIL$_IVPROTVAL,3,
:   446            0584  2                 SD_MAJOR,.MAJOR_P,.IMAGE_DESC);
:   447            0585  2
:   448          P 0586  2 IF_ERR(LIB$FIND_IMAGE_SYMBOL(.IMAGE_DESC,SD_MINOR,MINOR_P);,
:   449            0587  2         RETURN .STATUS);
:   450            0588  2
:   451            0589  2 IF .MINOR_P NEQ 1
:   452            0590  2     THEN RETURN SIGNAL(MAIL$_IVPROTVAL,3,
:   453            0591  2                 SD_MINOR,.MINOR_P,.IMAGE_DESC);
:   454            0592  2
:   455            0593  2 RETURN TRUE
:   456            0594  1 END;



                                    000C 00000 CHECK_PROTOCOL_VERSION:
                                                       .WORD    Save R2,R3                                ; 0566
                  53 00000000G   00   9E 00002         MOVAB    LIB$FIND_IMAGE_SYMBOL, R3                 ;
                  52      FD77   CF   9E 00009         MOVAB    SD_MAJOR, R2                              ;
                  5E             08   C2 0000E         SUBL2    #8, SP                                    ;
                          4004   8F   BB 00011         PUSHR    #^M<R2,SP>                                ; 0581
                            04   AC   DD 00015         PUSHL    IMAGE_DESC                                ;
                  63             03   FB 00018         CALLS    #3, LIB$FIND_IMAGE_SYMBOL                 ;
                  40             50   E9 0001B         BLBC     STATUS, 4$                                ;
                  01             6E   D1 0001E         CMPL     MAJOR_P, #1                               ; 0582
                                 0A   13 00021         BEQL     1$                                        ;
                            04   AC   DD 00023         PUSHL    IMAGE_DESC                                ; 0584
                            04   AE   DD 00026         PUSHL    MAJOR_P                                   ;
                                 52   DD 00029         PUSHL    R2                                        ; 0583
                                 1E   11 0002B         BRB      2$                                        ;
                            04   AE   9F 0002D 1$:     PUSHAB   MINOR_P                                   ; 0587
                            1C   A2   9F 00030         PUSHAB   SD_MINOR                                  ;
                            04   AC   DD 00033         PUSHL    IMAGE_DESC                                ;
                  63             03   FB 00036         CALLS    #3, LIB$FIND_IMAGE_SYMBOL                 ;
                  22             50   E9 00039         BLBC     STATUS, 4$                                ;
                  01        04   AE   D1 0003C         CMPL     MINOR_P, #1                               ; 0589
                                 19   13 00040         BEQL     3$                                        ;
                            04   AC   DD 00042         PUSHL    IMAGE_DESC                                ; 0591
                          08    AE  DD 00045        PUSHL   MINOR_P                              ;
                          1C    A2  9F 00048        PUSHAB  SD_MINOR                             ; 0590
                                03  DD 0004B 2$:    PUSHL   #3                                   ;
                    007E8132    8F  DD 0004D        PUSHL   #8290610                             ;
           00000000G  00        05  FB 00053        CALLS   #5, LIB$SIGNAL                       ;
                                    04 0005A        RET                                          ;
                      50        01  D0 0005B 3$:    MOVL    #1, R0                               ; 0593
                                    04 0005E 4$:    RET                                          ; 0594

; Routine Size:  95 bytes,    Routine Base:  $CODE$ + 0300
```

```
  1 ROUTINE TRY_CONNECT(LNKDESC,CNCTDESC,ALTOBJ_DESC) =
  1 !++
  1 !
  1 ! Try to connect with the remote node, ensuring that a connect
  1 ! confirm message is received.
  1 !
  1 !--
  2 BEGIN
  2 MAP
  2     LNKDESC : REF $BBLOCK,
  2     CNCTDESC : REF $BBLOCK;
  2
  2 BUILTIN
  2     NULLPARAMETER;
  2
  2 LOCAL
  2     STATUS,
  2     OBJPTR,
  2     PTR : REF VECTOR[,BYTE],
  2     PTR1 : REF $BBLOCK;
  2
  2 BIND
  2     TMPBUF = MAIL$G_CNCT[CNCT_T_BUFFER] : $BBLOCK,
  2     TMPWORD = TMPBUF : VECTOR[,WORD],
  2     TMPBYTE = TMPBUF : VECTOR[,BYTE],
  2     QIOSB = LNKDESC[LNK_Q_IOSB] : VECTOR[,WORD];
  2
  2 OBJPTR = 0;
  2 IF NOT NULLPARAMETER(3)
  2     THEN OBJPTR = .ALTOBJ_DESC;
  2
  2 INCRU I FROM 1 TO 5
  3 DO BEGIN
  3     !
  3     ! Try up to 5 times to access the remote node.  The extra times
  3     ! are done in the instance that the connect was made but we
  3     ! failed to read the mailbox.
  3     !
  4     IF NOT (STATUS = ACCESS_NODE(.LNKDESC,.CNCTDESC,.OBJPTR))
  3         THEN EXITLOOP;
  3     !
  3     ! Read the mailbox to get the connect confirm message
  3     !
P 4     IF (STATUS = $QIOW(CHAN=.LNKDESC[LNK_W_MBXCHAN],
P 4                 FUNC=IO$_READVBLK,
P 4                 IOSB=QIOSB,
P 4                 P1=TMPBUF,
  4                 P2=.MAIL$L_MBXBUF))
  4             AND (STATUS = .QIOSB[0])
  4             AND (.TMPWORD[0] EQL MSG$_CONFIRM)  !ensure it's a connect confirm
  4     THEN BEGIN
  4         PTR1 = TMPBYTE[4] + .TMPBYTE[4] + 2;
  4         PTR = .PTR1 - 1;
  4         !
  4         ! See if receiver is up to block mode transfer.  Assume 1 block
  4         ! transfers for now.
  4         !
```

```
;   515             0652  5           IF (.PTR[0] EQL CNF_C_LENGTH)
;   516             0653  4               AND NOT .PTR1[CNF_V_BLKSEND]
;   517             0654  5               AND (.PTR1[CNF_B_VERSION] GEQU CNF_C_VERS)
;   518             0655  5                   THEN IF (.(PTR1[CNF_B_ECO])<0,8,1> GEQ CNF_C_ECO)
;   519             0656  4                       THEN LNKDESC[LNK_V_BLKMODE] = .PTR1[CNF_V_BLKRECV];
;   520             0657  4           EXITLOOP;
;   521             0658  3           END;
;   522             0659  3       !
;   523             0660  3       ! We failed to read the connect confirm.  Issue a Deaccess and
;   524             0661  3       ! try again.
;   525             0662  3       !
;   526           P 0663  3       $QIOW(CHAN=.LNKDESC[LNK_W_CHAN],
;   527           P 0664  3             FUNC=IO$_DEACCESS,
;   528             0665  3             IOSB=QIOSB);
;   529             0666  3       STATUS = SS$_NODATA;
;   530             0667  2       END;        !loop
;   531             0668  2
;   532             0669  2 RETURN .STATUS
;   533             0670  1 END;



                                           03FC 00000 TRY_CONNECT:
                                                                 .WORD   Save R2,R3,R4,R5,R6,R7,R8,R9                ; 0595
                         59 00000000G  00  9E 00002              MOVAB   SYS$QIOW, R9                                ;
                         58 00000000G  00  9E 00009              MOVAB   TMPBUF, R8                                  ;
                         54        04  AC  D0 00010              MOVL    LNKDESC, R4                                 ; 0620
                                       57  D4 00014              CLRL    OBJPTR                                      ; 0622
                         03            6C  91 00016              CMPB    (AP), #3                                    ; 0623
                                       09  1F 00019              BLSSU   1$                                          ;
                                   0C  AC  D5 0001B              TSTL    12(AP)                                      ;
                                       04  13 0001E              BEQL    1$                                          ;
                         57        0C  AC  D0 00020              MOVL    ALTOBJ_DESC, OBJPTR                         ; 0624
                         56            01  D0 00024 1$:          MOVL    #1, I                                       ; 0665
                                       57  DD 00027 2$:          PUSHL   OBJPTR                                      ; 0633
                                   08  AC  DD 00029              PUSHL   CNCTDESC                                    ;
                                       54  DD 0002C              PUSHL   R4                                          ;
                   FE4F  CF            03  FB 0002E              CALLS   #3, ACCESS_NODE                             ;
                         55            50  D0 00033              MOVL    R0, STATUS                                  ;
                         5C            55  E9 00036              BLBC    STATUS, 3$                                  ;
                                       7E  7C 00039              CLRQ    -(SP)                                       ; 0642
                                       7E  7C 0003B              CLRQ    -(SP)                                       ;
                            00000000'  00  DD 0003D              PUSHL   MAIL$L_MBXBUF                               ;
                                       58  DD 00043              PUSHL   R8                                          ;
                                       7E  7C 00045              CLRQ    -(SP)                                       ;
                                   14  A4  9F 00047              PUSHAB  20(R4)                                      ;
                                       31  DD 0004A              PUSHL   #49                                         ;
                         7E        2A  A4  3C 0004C              MOVZWL  42(R4), -(SP)                               ;
                                       7E  D4 00050              CLRL    -(SP)                                       ;
                         69            0C  FB 00052              CALLS   #12, SYS$QIOW                               ;
                         55            50  D0 00055              MOVL    R0, STATUS                                  ;
                         3C            55  E9 00058              BLBC    STATUS, 4$                                  ;
                         55        14  A4  3C 0005B              MOVZWL  20(R4), STATUS                              ; 0643
                         35            55  E9 0005F              BLBC    STATUS, 4$                                  ;
                         31            68  B1 00062              CMPW    TMPWORD, #49                                ; 0644
```

```
                                                       30  12 00065         BNEQ    4$                                  ;
                                         50      06    A8  9E 00067         MOVAB   TMPBYTE+6, R0                       ; 0646
                                         52      04    A8  9A 0006B         MOVZBL  TMPBYTE+4, PTR1                     ;
                                         52            50  C0 0006F         ADDL2   R0, PTR1                            ;
                                         53      FF    A2  9E 00072         MOVAB   -1(R2), PTR                         ; 0647
                                         10            63  91 00076         CMPB    (PTR), #16                          ; 0652
                                                       41  12 00079         BNEQ    5$                                  ;
                                         3D      08    A2  E8 0007B         BLBS    8(PTR1), 5$                         ; 0653
                                         03            62  91 0007F         CMPB    (PTR1), #3                          ; 0654
                                                       38  1F 00082         BLSSU   5$                                  ;
                                                 01    A2  95 00084         TSTB    1(PTR1)                             ; 0655
                                                       33  19 00087         BLSS    5$                                  ;
            50      08    A2             01            01  EF 00089         EXTZV   #1, #1, 8(PTR1), R0                 ; 0656
      2E    A4            01             04            50  F0 0008F         INSV    R0, #4, #1, 46(R4)                  ;
                                                       25  11 00095 3$:     BRB     5$                                  ; 0645
                                                       7E  7C 00097 4$:     CLRQ    -(SP)                               ; 0665
                                                       7E  7C 00099         CLRQ    -(SP)                               ;
                                                       7E  7C 0009B         CLRQ    -(SP)                               ;
                                                       7E  7C 0009D         CLRQ    -(SP)                               ;
                                                 14    A4  9F 0009F         PUSHAB  20(R4)                              ;
                                                       34  DD 000A2         PUSHL   #52                                 ;
                                         7E      2C    A4  3C 000A4         MOVZWL  44(R4), -(SP)                       ;
                                                       7E  D4 000A8         CLRL    -(SP)                               ;
                                         69            0C  FB 000AA         CALLS   #12, SYS$QIOW                       ;
                                         55    01AC    8F  3C 000AD         MOVZWL  #428, STATUS                        ; 0666
                                                       56  D6 000B2         INCL    I                                   ; 0626
                                         05            56  D1 000B4         CMPL    I, #5                               ;
                                                       03  1A 000B7         BGTRU   5$                                  ;
                                                     FF6B  31 000B9         BRW     2$                                  ;
                                         50            55  D0 000BC 5$:     MOVL    STATUS, R0                          ; 0669
                                                           04 000BF         RET                                         ; 0670

; Routine Size:  192 bytes,    Routine Base:  $CODE$ + 035F
```

```
1 ROUTINE CONNECT_LINK(LNKDESC,PROTOCOL_DESC,NODE_DESC,CNCTDESC) =
1 !+++
1 ! FUNCTIONAL DESCRIPTION:
1 !
1 !       Make an outbound connection with a remote node
1 !
1 ! INPUTS:
1 !
1 !       lnkdesc = address of lnk descriptor block
1 !       protocol_desc = address of protocol descriptor
1 !       node_desc = address of descriptor of node name
1 !       cnctdesc = address of cnct block for message
1 !
1 !--
2 BEGIN
2
2 MAP
2     LNKDESC : REF $BBLOCK,
2     PROTOCOL_DESC : REF $BBLOCK,
2     NODE_DESC : REF $BBLOCK,
2     CNCTDESC : REF $BBLOCK;
2
2 LOCAL
2     STATUS,
2     PTR : REF VECTOR[,BYTE],
2     PTR1 : REF $BBLOCK,
2     TRNLNMLST : $ITMLST_DECL(ITEMS=1),
2     DESC : VECTOR[2,LONG],
2     DESC_1 : VECTOR[2,LONG];
2
2 BIND
2     TMPBUF = MAIL$G_CNCT[CNCT_T_BUFFER] : $BBLOCK,
2     TMPWORD = TMPBUF : VECTOR[,WORD],
2     TMPBYTE = TMPBUF : VECTOR[,BYTE],
2     QIOSB = LNKDESC[LNK_Q_IOSB] : VECTOR[,WORD];
2
2 IF NOT .LNKDESC[LNK_V_ALTP]
3 THEN BEGIN
3 !
3 ! Use DECNET
3 !
3     !
3     ! Assign a channel to _NET.  Then, attempt to access the remote
3     ! node.
3     !
4     IF (STATUS = LIB$ASN_WTH_MBX(NETACP_DESC,
4                          MAIL$L_MBXBUF,MAIL$L_MBXQUO,LNKDESC[LNK_W_CHAN],
4                          LNKDESC[LNK_W_MBXCHAN]))
3     THEN STATUS = TRY_CONNECT(.LNKDESC,.CNCTDESC);
3     !
3     ! Check for control/c typed after we switched handlers.  unwind if
3     ! ctrl/c typed.
3     !
3     IF .MAIL$GL_FLAGS[MAIF_V_CTRLCFL]
4     THEN BEGIN
4         MAIL$GL_FLAGS[MAIF_V_CTRLCFL] = 0;
4         $DASSGN(CHAN=.LNKDESC[LNK_W_CHAN]);
```

```
;   592          0728  4          SIGNAL(MAIL$_CONABORT,1,DESC,MAIL$_SENDABORT); !Will unwind
;   593          0729  3          END;
;   594          0730  3      IF NOT .STATUS
;   595          0731  4      THEN BEGIN
;   596          0732  4          $DASSGN(CHAN=.LNKDESC[LNK_W_CHAN]);
;   597          0733  4          IF NOT .LNKDESC[LNK_V_DEAD]
;   598          0734  5              THEN (SIGNAL(MAIL$_LOGLINK,1,.NODE_DESC,.STATUS);
;   599          0735  5                          LNKDESC[LNK_L_STS] = .STATUS)
;   600          0736  4              ELSE RETURN MAIL$_LOGLINK;
;   601          0737  3          END;
;   602          0738  3      RETURN .STATUS
;   603          0739  3      END
;   604          0740  3  ELSE BEGIN
;   605          0741  3  !
;   606          0742  3  ! Alternate protocol.  Translate MAIL$PROTOCOL_pname
;   607          0743  3  ! If it translates, use that for the image name.  If it doesn't
;   608          0744  3  ! translate, use pname_MAILSHR
;   609          0745  3  !
;   610          0746  3      PTR = CH$MOVE(.PREFIX_DESC[DSC$W_LENGTH],
;   611          0747  3                          .PREFIX_DESC[DSC$A_POINTER],TMPBUF);
;   612          0748  3      PTR = CH$MOVE(.PROTOCOL_DESC[DSC$W_LENGTH],
;   613          0749  3                          .PROTOCOL_DESC[DSC$A_POINTER],.PTR);
;   614          0750  3
;   615          0751  3      DESC[0] = .PTR - TMPBUF;
;   616          0752  3      DESC[1] = TMPBUF;
;   617        P 0753  3      $ITMLST_INIT(ITMLST=TRNLNMLST,
;   618        P 0754  3          (ITMCOD=LNM$_STRING,BUFADR=.DESC[1],
;   619          0755  3                  BUFSIZ=NAM$C_MAXRSS,RETLEN=DESC));
;   620          0756  3
;   621        P 0757  3      IF NOT $TRNLNM(ATTR=%REF(LNM$M_CASE_BLIND),
;   622        P 0758  3          TABNAM=MAIL$SD_LNM_FILE_DEV,
;   623        P 0759  3          LOGNAM=DESC,
;   624          0760  4          ITMLST=TRNLNMLST)
;   625          0761  4      THEN BEGIN
;   626          0762  4          PTR = CH$MOVE(.PROTOCOL_DESC[DSC$W_LENGTH],
;   627          0763  4                          .PROTOCOL_DESC[DSC$A_POINTER],TMPBUF);
;   628          0764  4          PTR = CH$MOVE(8,UPLIT('_MAILSHR'),.PTR);
;   629          0765  4          DESC[0] = .PTR - TMPBUF;
;   630          0766  4          END
;   631          0767  3      ELSE IF .TMPBYTE[0] EQL %C'%'
;   632          0768  4      THEN BEGIN
;   633          0769  4          !
;   634          0770  4          ! If it has a leading percent, then strip it off and attempt
;   635          0771  4          ! to connect to the resulting string. It should have the format
;   636          0772  4          ! node::"task=taskname", STAR::"TASK=MAILX" for instance.
;   637          0773  4          ! If successful, mail will speak mail-11 with the remote slave
;   638          0774  4          !
;   639          0775  4          DESC[0] = .DESC[0] - 1;
;   640          0776  4          DESC[1] = .DESC[1] + 1;
;   641          0777  4          DESC_1[0] = .DESC[0];
;   642          0778  4          DESC_1[1] = .DESC[1];
;   643          0779  4          IF NOT CH$FAIL(PTR = CH$FIND_CH(.DESC_1[0],.DESC_1[1],%C':'))
;   644          0780  4                  THEN DESC_1[0] = .PTR - .DESC_1[1];
;   645          0781  4          DESC_1[0] = MINU(.DESC_1[0],LNK_S_NODE);          !Descriptor of node name
;   646          0782  4          CH$MOVE(.DESC_1[0],.DESC_1[1],LNKDESC[LNK_T_NODE]); !Also put in lnkdesc
;   647          0783  4          DESC_1[1] = LNKDESC[LNK_T_NODE];
;   648          0784  4          LNKDESC[LNK_V_ALTP] = FALSE;
;   649             0785  4             LNKDESC[LNK_B_NODLEN] = 0;
;   650             0786  5             IF (STATUS = LIB$ASN_WTH_MBX(NETACP_DESC,
;   651             0787  5                                 MAIL$L_MBXBUF,MAIL$L_MBXQUO,LNKDESC[LNK_W_CHAN],
;   652             0788  5                                 LNKDESC[LNK_W_MBXCHAN]))
;   653             0789  4                 THEN STATUS = TRY_CONNECT(.LNKDESC,.CNCTDESC,DESC);
;   654             0790  4             LNKDESC[LNK_B_NODLEN] = .DESC_1[0];
;   655             0791  4             IF NOT .STATUS
;   656             0792  5             THEN BEGIN
;   657             0793  5                 $DASSGN(CHAN=.LNKDESC[LNK_W_CHAN]);
;   658             0794  5                 IF NOT .LNKDESC[LNK_V_DEAD]
;   659             0795  6                     THEN (SIGNAL(MAIL$_LOGLINK,1,DESC_1,.STATUS);
;   660             0796  6                                 LNKDESC[LNK_L_STS] = .STATUS)
;   661             0797  5                     ELSE RETURN MAIL$_LOGLINK;
;   662             0798  4                 END;
;   663             0799  4             RETURN .STATUS;
;   664             0800  3             END;
;   665             0801  3         DESC_1[0] = .PREFIX_DESC[DSC$W_LENGTH] - 1;
;   666             0802  3         DESC_1[1] = .PREFIX_DESC[DSC$A_POINTER];
;   667           P 0803  3         IF_ERR(LIB$FIND_IMAGE_SYMBOL(DESC,DESC_1,LNKDESC[LNK_L_TFRADR]);,
;   668             0804  3                     RETURN .STATUS);
;   669           P 0805  3         IF_ERR(CHECK_PROTOCOL_VERSION(DESC);,
;   670             0806  3                     RETURN .STATUS);
;   671             0807  3         RETURN (.LNKDESC[LNK_L_TFRADR])(LNKDESC[LNK_L_CONTEXT],
;   672             0808  3                                         LNK_C_OUT_CONNECT,
;   673             0809  3                                         .PROTOCOL_DESC,
;   674             0810  3                                         .NODE_DESC,
;   675             0811  3                                         MAIL$_LOGLINK,
;   676             0812  3                                         .CNCTDESC[CNCT_B_FILRAT],
;   677             0813  3                                         .CNCTDESC[CNCT_B_FILRFM],
;   678             0814  3                                         .MAIL$GL_SYSFLAGS<16,16,0>,
;   679             0815  4                                         (IF .MAIL$GL_FLAGS[MAIF_V_ATTACHMENT]
;   680             0816  4                                                 THEN MAIL$Q_ATTDESC
;   681             0817  3                                                 ELSE 0));
;   682             0818  2         END;
;   683             0819  1 END;



                                                       0041F           .BLKB   1
                          52  48  53  4C  49  41  4D  5F  00420 P.AAQ:  .ASCII  \_MAILSHR\                                   ;

                                                                       .EXTRN  SYS$DASSGN, SYS$TRNLNM

                                                  0FFC 00000 CONNECT_LINK:
                                                                       .WORD   Save R2,R3,R4,R5,R6,R7,R8,R9,R10,R11        ; 0671
                                  5B 00000000'  00  9E 00002           MOVAB   MAIL$L_MBXQUO, R11                          ;
                                  5A 00000000G  00  9E 00009           MOVAB   TMPBUF, R10                                 ;
                                  59      FBF4  CF  9E 00010           MOVAB   NETACP_DESC, R9                             ;
                                  5E            24  C2 00015           SUBL2   #36, SP                                     ;
                                  56        04  AC  D0 00018           MOVL    LNKDESC, R6                                 ; 0705
                        79        2E   A6       02  E0 0001C           BBS     #2, 46(R6), 5$                              ; 0707
                                            2A  A6  9F 00021           PUSHAB  42(R6)                                      ; 0718
                                            2C  A6  9F 00024           PUSHAB  44(R6)                                      ; 0717
                                                5B  DD 00027           PUSHL   R11                                         ; 0716
                                            FC  AB  9F 00029           PUSHAB  MAIL$L_MBXBUF                               ;
                                                59  DD 0002C           PUSHL   R9                                          ;
                          00000000G  00         05  FB 0002E           CALLS   #5, LIB$ASN_WTH_MBX                         ; 0718
```

```
                  58           50 D0 00035        MOVL     R0, STATUS                               ;
                  0D           58 E9 00038        BLBC     STATUS, 1$                               ;
                            10 AC DD 0003B        PUSHL    CNCTDESC                                 ; 0719
                               56 DD 0003E        PUSHL    R6                                       ;
             FEF2 CF           02 FB 00040        CALLS    #2, TRY_CONNECT                          ;
                  58           50 D0 00045        MOVL     R0, STATUS                               ;
                  2A 00000000G 00 E9 00048 1$:    BLBC     MAIL$GL_FLAGS+1, 2$                      ; 0724
        00000000G 00           01 8A 0004F        BICB2    #1, MAIL$GL_FLAGS+1                      ; 0726
                  7E        2C A6 3C 00056        MOVZWL   44(R6), -(SP)                            ; 0727
        00000000G 00           01 FB 0005A        CALLS    #1, SYS$DASSGN                           ;
                      007E805A 8F DD 00061        PUSHL    #8290394                                 ; 0728
                            10 AE 9F 00067        PUSHAB   DESC                                     ;
                               01 DD 0006A        PUSHL    #1                                       ;
                      007E8112 8F DD 0006C        PUSHL    #8290578                                 ;
        00000000G 00           04 FB 00072        CALLS    #4, LIB$SIGNAL                           ;
                  03           58 E9 00079 2$:    BLBC     STATUS, 3$                               ; 0730
                             0132 31 0007C        BRW      14$                                      ;
                  7E        2C A6 3C 0007F 3$:    MOVZWL   44(R6), -(SP)                            ; 0732
        00000000G 00           01 FB 00083        CALLS    #1, SYS$DASSGN                           ;
    03         2E A6           01 E1 0008A        BBC      #1, 46(R6), 4$                           ; 0733
                             0117 31 0008F        BRW      13$                                      ;
                               58 DD 00092 4$:    PUSHL    STATUS                                   ; 0734
                            0C AC DD 00094        PUSHL    NODE_DESC                                ;
                             00FA 31 00097        BRW      12$                                      ;
                  50        3C A9 D0 0009A 5$:    MOVL     PREFIX_DESC+4, R0                        ; 0747
    6A            60        38 A9 28 0009E        MOVC3    PREFIX_DESC, (R0), TMPBUF                ; 0746
                  57        08 AC D0 000A3        MOVL     PROTOCOL_DESC, R7                        ; 0748
    63         04 B7           67 28 000A7        MOVC3    (R7), @4(R7), (PTR)                      ; 0749
                  50           6A 9E 000AC        MOVAB    TMPBUF, R0                               ; 0751
0C  AE            53           50 C3 000AF        SUBL3    R0, PTR, DESC                            ;
               10 AE           6A 9E 000B4        MOVAB    TMPBUF, DESC+4                           ; 0752
                  50        14 AE 9E 000B8        MOVAB    TRNLNMLST, $$ITMBLKPTR                   ; 0755
                  80  000200FF 8F D0 000BC        MOVL     #131327, ($$ITMBLKPTR)+                  ;
                  80        10 AE D0 000C3        MOVL     DESC+4, ($$ITMBLKPTR)+                   ;
                  80        0C AE 9E 000C7        MOVAB    DESC, ($$ITMBLKPTR)+                     ;
                               80 D4 000CB        CLRL     ($$ITMBLKPTR)+                           ;
                            14 AE 9F 000CD        PUSHAB   TRNLNMLST                                ; 0760
                               7E D4 000D0        CLRL     -(SP)                                    ;
                            14 AE 9F 000D2        PUSHAB   DESC                                     ;
                     00000000G 00 9F 000D5        PUSHAB   MAIL$SD_LNM_FILE_DEV                     ;
               10 AE  02000000 8F D0 000DB        MOVL     #33554432, T6(SP)                        ;
                            10 AE 9F 000E3        PUSHAB   16(SP)                                   ;
        00000000G 00           05 FB 000E6        CALLS    #5, SYS$TRNLNM                           ;
                  16           50 E8 000ED        BLBS     R0, 7$                                   ;
    6A         04 B7           67 28 000F0        MOVC3    (R7), @4(R7), TMPBUF                     ; 0762
    63       03F0 C9           08 28 000F5        MOVC3    #8, P.AAQ, (PTR)                         ; 0764
                  50           6A 9E 000FB        MOVAB    TMPBUF, R0                               ; 0765
0C  AE            53           50 C3 000FE        SUBL3    R0, PTR, DESC                            ;
                             00AF 31 00103 6$:    BRW      15$                                      ; 0757
                  25           6A 91 00106 7$:    CMPB     TMPBYTE, #37                             ; 0767
                               F8 12 00109        BNEQ     6$                                       ;
                            0C AE D7 0010B        DECL     DESC                                     ; 0775
                            10 AE D6 0010E        INCL     DESC+4                                   ; 0776
               04 AE        0C AE 7D 00111        MOVQ     DESC, DESC_1                             ; 0777
08  BE         04 AE           3A 3A 00116        LOCC     #58, DESC_T, @DESC_1+4                   ; 0779
                               02 12 0011C        BNEQ     8$                                       ;
                               51 D4 0011E        CLRL     R1                                       ;
```

```
                    53             51 D0 00120 8$:     MOVL    R1, PTR                           ;
                                   06 13 00123         BEQL    9$                                ;
04   AE             53         08  AE C3 00125         SUBL3   DESC_1+4, PTR, DESC_1             ; 0780
                    50         04  AE D0 0012B 9$:     MOVL    DESC_1, R0                        ; 0781
                    1F             50 D1 0012F         CMPL    R0, #31                           ;
                                   03 1B 00132         BLEQU   10$                               ;
                    50             1F D0 00134         MOVL    #31, R0                           ;
                04  AE             50 D0 00137 10$:    MOVL    R0, DESC_1                        ;
30   A6         08  BE         04  AE 28 0013B         MOVC3   DESC_1, @DESC_1+4, 48(R6)         ; 0782
                08  AE         30  A6 9E 00142         MOVAB   48(R6), DESC_1+4                  ; 0783
                2E  A6       FF04  8F AA 00147         BICW2   #65284, 46(R6)                    ; 0785
                               2A  A6 9F 0014D         PUSHAB  42(R6)                            ; 0788
                               2C  A6 9F 00150         PUSHAB  44(R6)                            ; 0787
                                   5B DD 00153         PUSHL   R11                               ; 0786
                               FC  AB 9F 00155         PUSHAB  MAIL$L_MBXBUF                     ;
                                   59 DD 00158         PUSHL   R9                                ;
         00000000G  00             05 FB 0015A         CALLS   #5, LIB$ASN_WTH_MBX               ; 0788
                    58             50 D0 00161         MOVL    R0, STATUS                        ;
                    10             58 E9 00164         BLBC    STATUS, 11$                       ;
                               0C  AE 9F 00167         PUSHAB  DESC                              ; 0789
                               10  AC DD 0016A         PUSHL   CNCTDESC                          ;
                                   56 DD 0016D         PUSHL   R6                                ;
              FDC3  CF             03 FB 0016F         CALLS   #3, TRY_CONNECT                   ;
                    58             50 D0 00174         MOVL    R0, STATUS                        ;
                2F  A6         04  AE 90 00177 11$:    MOVB    DESC_1, 47(R6)                    ; 0790
                    32             58 E8 0017C         BLBS    STATUS, 14$                       ; 0791
                    7E         2C  A6 3C 0017F         MOVZWL  44(R6), -(SP)                     ; 0793
         00000000G  00             01 FB 00183         CALLS   #1, SYS$DASSGN                    ;
     1A         2E  A6             01 E0 0018A         BBS     #1, 46(R6), 13$                   ; 0794
                                   58 DD 0018F         PUSHL   STATUS                            ; 0795
                               08  AE 9F 00191         PUSHAB  DESC_1                            ;
                                   01 DD 00194 12$:    PUSHL   #1                                ;
                         007E802A  8F DD 00196         PUSHL   #8290346                          ;
         00000000G  00             04 FB 0019C         CALLS   #4, LIB$SIGNAL                    ;
                1C  A6             58 D0 001A3         MOVL    STATUS, 28(R6)                    ; 0796
                                   08 11 001A7         BRB     14$                               ;
                    50   007E802A  8F D0 001A9 13$:    MOVL    #8290346, R0                      ; 0797
                                      04 001B0         RET                                       ;
                    50             58 D0 001B1 14$:    MOVL    STATUS, R0                        ; 0799
                                      04 001B4         RET                                       ;
                04  AE         38  A9 3C 001B5 15$:    MOVZWL  PREFIX_DESC, DESC_1               ; 0801
                               04  AE D7 001BA         DECL    DESC_1                            ;
                08  AE         3C  A9 D0 001BD         MOVL    PREFIX_DESC+4, DESC_1+4           ; 0802
                               10  A6 9F 001C2         PUSHAB  16(R6)                            ; 0804
                               08  AE 9F 001C5         PUSHAB  DESC_1                            ;
                               14  AE 9F 001C8         PUSHAB  DESC                              ;
         00000000G  00             03 FB 001CB         CALLS   #3, LIB$FIND_IMAGE_SYMBOL         ;
                    49             50 E9 001D2         BLBC    STATUS, 18$                       ;
                               0C  AE 9F 001D5         PUSHAB  DESC                              ; 0806
              FCFB  CF             01 FB 001D8         CALLS   #1, CHECK_PROTOCOL_VERSION        ;
                    3E             50 E9 001DD         BLBC    STATUS, 18$                       ;
     0B  00000000G  00             03 E1 001E0         BBC     #3, MAIL$GL_FLAGS+2, 16$          ; 0815
                    50  00000000G  00 9E 001E8         MOVAB   MAIL$Q_ATTDESC, R0                ;
                                   50 DD 001EF         PUSHL   R0                                ;
                                   02 11 001F1         BRB     17$                               ;
                                   7E D4 001F3 16$:    CLRL    -(SP)                             ;
                    7E  00000000G  00 3C 001F5 17$:    MOVZWL  MAIL$GL_SYSFLAGS+2, -(SP)         ; 0814
```

```
                                        50        10    AC  D0 001FC           MOVL    CNCTDESC, R0                                     ; 0813
                                        7E      0081    C0  9A 00200           MOVZBL  129(R0), -(SP)                                   ;
                                        7E      0080    C0  9A 00205           MOVZBL  128(R0), -(SP)                                   ; 0812
                                           007E802A    8F  DD 0020A           PUSHL   #8290346                                         ; 0807
                                                 0C    AC  DD 00210           PUSHL   NODE_DESC                                        ; 0810
                                                       57  DD 00213           PUSHL   R7                                               ; 0809
                                                       7E  D4 00215           CLRL    -(SP)                                            ; 0807
                                                 0C    A6  9F 00217           PUSHAB  12(R6)                                           ;
                                  10   B6              09  FB 0021A           CALLS   #9, @16(R6)                                      ;
                                                           04 0021E 18$:      RET                                                      ; 0819

; Routine Size:  543 bytes,    Routine Base:  $CODE$ + 0428
;  685        0820  1 GLOBAL ROUTINE MAIL$CREATELINK (PROTOCOL_DESC,NODE_DESC,CNCTDESC,RETADR) =
;  686        0821  1 !+++
;  687        0822  1 ! FUNCTIONAL DESCRIPTION:
;  688        0823  1 !
;  689        0824  1 !       This routine is called to create a logical link to the
;  690        0825  1 !       specified node. First, the existing logical link list is
;  691        0826  1 !       searched to see if a link to that node already exists.  If
;  692        0827  1 !       it does, then the address of the list entry is returned.
;  693        0828  1 !       If a link does not exist, one is assigned and a logical link
;  694        0829  1 !       list entry is created, entered in the list, and the address returned.
;  695        0830  1 !
;  696        0831  1 ! INPUTS:
;  697        0832  1 !
;  698        0833  1 !       protocol_desc = address of descriptor of protocol, 0 implies DECnet
;  699        0834  1 !       node_desc = address of descriptor of node name
;  700        0835  1 !       cnctdesc = address of cnct block
;  701        0836  1 !       retadr = address of longword to return logical link list entry address
;  702        0837  1 !
;  703        0838  1 !---
;  704        0839  2 BEGIN
;  705        0840  2
;  706        0841  2 MAP
;  707        0842  2     PROTOCOL_DESC : REF $BBLOCK,
;  708        0843  2     NODE_DESC : REF $BBLOCK,
;  709        0844  2     CNCTDESC : REF $BBLOCK,
;  710        0845  2     RETADR : REF VECTOR[,LONG];
;  711        0846  2
;  712        0847  2 BUILTIN
;  713        0848  2     INSQUE;
;  714        0849  2
;  715        0850  2 LOCAL
;  716        0851  2     STATUS,
;  717        0852  2     PTR : REF $BBLOCK;
;  718        0853  2
;  719        0854  2 BIND
;  720        0855  2     LNKLST = CNCTDESC[CNCT_Q_LNKLST] : VECTOR[,LONG];
;  721        0856  2
;  722        0857  2 PTR = .LNKLST[0];
;  723        0858  2 !
;  724        0859  2 ! See if link already exists
;  725        0860  2 !
;  726        0861  2 WHILE .PTR NEQ LNKLST[0]
;  727        0862  3 DO BEGIN
;  728        0863  3     IF CH$EQL(.NODE_DESC[DSC$W_LENGTH],.NODE_DESC[DSC$A_POINTER],
;  729        0864  3             .PTR[LNK_B_NODLEN],PTR[LNK_T_NODE])
;  730        0865  5     THEN IF ((.PTR[LNK_B_PNLEN] EQL 0)           !Check protocol spec match
;  731        0866  4             AND (.PROTOCOL_DESC[DSC$W_LENGTH] EQL 0))
;  732        0867  3             OR CH$EQL(.PROTOCOL_DESC[DSC$W_LENGTH],
;  733        0868  3                         .PROTOCOL_DESC[DSC$A_POINTER],
;  734        0869  3                         .PTR[LNK_B_PNLEN],PTR[LNK_T_PNAM])
;  735        0870  4         THEN BEGIN
;  736        0871  4             RETADR[0] = .PTR;                       !Return address of found lnk
;  737        0872  4             IF .PTR[LNK_V_DEAD]
;  738        0873  4                 AND .MAIL$GL_FLAGS[MAIF_V_NETJOB] !Only signal if net slave
;  739        0874  4                 THEN SIGNAL(MAIL$_LOGLINK,1,.NODE_DESC,.PTR[LNK_L_STS]);
;  740        0875  4             RETURN (NOT .PTR[LNK_V_DEAD]);      ! and whether it's dead or not
;  741        0876  3             END;
;  742              0877  3      PTR = .PTR[LNK_L_FLINK];                              !Next block
;  743              0878  2      END;
;  744              0879  2  !
;  745              0880  2  ! Not found.  Create logical link list entry
;  746              0881  2  !
;  747            P 0882  2  IF_ERR(LIB$GET_VM(%REF(.PROTOCOL_DESC[DSC$W_LENGTH]+LNK_C_LENGTH),PTR);,
;  748            P 0883  2          SIGNAL(.STATUS);
;  749              0884  2          RETURN .STATUS);
;  750              0885  2
;  751              0886  2  !
;  752              0887  2  ! Insert into the list
;  753              0888  2  !
;  754              0889  2  CH$FILL(0,LNK_C_LENGTH,.PTR);
;  755              0890  2  INSQUE(.PTR,LNK[ST]);
;  756              0891  2  PTR[LNK_B_NODLEN] = .NODE_DESC[DSC$W_LENGTH];
;  757              0892  2  CH$MOVE(.PTR[LNK_B_NODLEN],.NODE_DESC[DSC$A_POINTER],PTR[LNK_T_NODE]);
;  758              0893  2  !
;  759              0894  2  ! Copy protocol name if passed.  Set ALTP flag
;  760              0895  2  !
;  761              0896  2  IF (PTR[LNK_B_PNLEN] = .PROTOCOL_DESC[DSC$W_LENGTH]) NEQ 0
;  762              0897  3  THEN BEGIN
;  763              0898  3      CH$MOVE(.PTR[LNK_B_PNLEN],.PROTOCOL_DESC[DSC$A_POINTER],
;  764              0899  3                                  PTR[LNK_T_PNAM]);
;  765              0900  3      PTR[LNK_V_ALTP] = TRUE;
;  766              0901  2      END;
;  767              0902  2  !
;  768              0903  2  ! Create logical link to slave mail
;  769              0904  2  !
;  770              0905  2  RETADR[0] = .PTR;
;  771              0906  2  STATUS = CONNECT_LINK(.PTR,.PROTOCOL_DESC,.NODE_DESC,.CNCTDESC);
;  772              0907  2  $DASSGN(CHAN=.PTR[LNK_W_MBXCHAN]);                     !Deassign mailbox now
;  773              0908  2  IF NOT .STATUS
;  774              0909  3      THEN BEGIN
;  775              0910  3          PTR[LNK_W_CHAN] = 0;
;  776              0911  3          PTR[LNK_V_DEAD] = TRUE;
;  777              0912  2          END;
;  778              0913  2
;  779              0914  2  RETURN .STATUS
;  780              0915  2
;  781              0916  1  END;



                                                  03FC 00000          .ENTRY   MAIL$CREATELINK, Save R2,R3,R4,R5,R6,R7,R8,-; 0820
                                                                               R9                                         ;
                          59 00000000G      00  9E 00002          MOVAB    LIB$SIGNAL, R9                             ;
                          5E                08  C2 00009          SUBL2    #8, SP                                     ;
            56       0C   AC                30  C1 0000C          ADDL3    #48, CNCTDESC, R6                          ; 0855
                     04   AE                66  D0 00011          MOVL     (R6), PTR                                  ; 0857
                          55         08     AC  D0 00015          MOVL     NODE_DESC, R5                              ; 0863
                          54         04     AE  D0 00019  1$:     MOVL     PTR, R4                                    ; 0861
                          56                54  D1 0001D          CMPL     R4, R6                                     ;
                                            5D  13 00020          BEQL     6$                                         ;
                          50         2F     A4  9A 00022          MOVZBL   47(R4), R0                                 ; 0864
      50          00     04   B5         08     BC  2D 00026          CMPC5    @NODE_DESC, @4(R5), #0, R0, 48(R4)         ;
```

```
                                                  30   A4     0002D                                                               ;
                                                       48  12 0002F         BNEQ    5$                                            ;
                                                  4F   A4  95 00031         TSTB    79(R4)                                        ; 0865
                                                       05  12 00034         BNEQ    2$                                            ;
                                                  04   BC  B5 00036         TSTW    @PROTOCOL_DESC                                ; 0866
                                                       12  13 00039         BEQL    3$                                            ;
                                         50       04   AC  D0 0003B 2$:     MOVL    PROTOCOL_DESC, R0                             ; 0867
                                         51       4F   A4  9A 0003F         MOVZBL  79(R4), R1                                    ; 0869
           51             00        04   B0            60  2D 00043         CMPC5   (R0), @4(R0), #0, R1, 80(R4)                  ;
                                                  50   A4     00049                                                               ;
                                                       2C  12 0004B         BNEQ    5$                                            ;
                                    10   BC            54  D0 0004D 3$:     MOVL    R4, @RETADR                                   ; 0871
                          19        2E   A4            01  E1 00051         BBC     #1, 46(R4), 4$                                ; 0872
                          11 00000000G   00            01  E1 00056         BBC     #1, MAIL$GL_FLAGS, 4$                         ; 0873
                                                  1C   A4  DD 0005E         PUSHL   28(R4)                                        ; 0874
                                                  08   AC  DD 00061         PUSHL   NODE_DESC                                     ;
                                                       01  DD 00064         PUSHL   #1                                            ;
                                            007E802A   8F  DD 00066         PUSHL   #8290346                                      ;
                                         69            04  FB 0006C         CALLS   #4, LIB$SIGNAL                                ;
           50       2E    A4             01            01  EF 0006F 4$:     EXTZV   #1, #1, 46(R4), R0                            ; 0875
                                         50            50  D2 00075         MCOML   R0, R0                                        ;
                                                           04 00078         RET                                                   ;
                                    04   AE            64  D0 00079 5$:     MOVL    (R4), PTR                                     ; 0877
                                                       9A  11 0007D         BRB     1$                                            ; 0861
                                                  04   AE  9F 0007F 6$:     PUSHAB  PTR                                           ; 0884
                                    04   AE       04   BC  3C 00082         MOVZWL  @PROTOCOL_DESC, 4(SP)                         ;
                                    04   AE 00000050   8F  C0 00087         ADDL2   #80, 4(SP)                                    ;
                                                  04   AE  9F 0008F         PUSHAB  4(SP)                                         ;
                             00000000G   00            02  FB 00092         CALLS   #2, LIB$GET_VM                                ;
                                         52            50  D0 00099         MOVL    R0, STATUS                                    ;
                                         07            52  E8 0009C         BLBS    STATUS, 7$                                    ;
                                                       52  DD 0009F         PUSHL   STATUS                                        ;
                                         69            01  FB 000A1         CALLS   #1, LIB$SIGNAL                                ;
                                                       68  11 000A4         BRB     9$                                            ;
    0050   8F             00             6E            00  2C 000A6 7$:     MOVC5   #0, (SP), #0, #80, @PTR                       ; 0889
                                                  04   BE     000AD                                                               ;
                                         66       04   BE  0E 000AF         INSQUE  @PTR, (R6)                                    ; 0890
                                         56       04   AE  D0 000B3         MOVL    PTR, R6                                       ; 0891
                                         58       08   AC  D0 000B7         MOVL    NODE_DESC, R8                                 ;
                                    2F   A6            68  90 000BB         MOVB    (R8), 47(R6)                                  ;
                                         50       2F   A6  9A 000BF         MOVZBL  47(R6), R0                                    ; 0892
                    30    A6        04   B8            50  28 000C3         MOVC3   R0, @4(R8), 48(R6)                            ;
                                         57       04   AC  D0 000C9         MOVL    PROTOCOL_DESC, R7                             ; 0896
                                         50            67  3C 000CD         MOVZWL  (R7), R0                                      ;
                                    4F   A6            50  90 000D0         MOVB    R0, 79(R6)                                    ;
                                                       50  D5 000D4         TSTL    R0                                            ;
                                                       0E  13 000D6         BEQL    8$                                            ;
                                         50       4F   A6  9A 000D8         MOVZBL  79(R6), R0                                    ; 0898
                    50    A6        04   B7            50  28 000DC         MOVC3   R0, @4(R7), 80(R6)                            ; 0899
                                    2E   A6            04  88 000E2         BISB2   #4, 46(R6)                                    ; 0900
                                    10   BC            56  D0 000E6 8$:     MOVL    R6, @RETADR                                   ; 0905
                                                  0C   AC  DD 000EA         PUSHL   CNCTDESC                                      ; 0906
                                                01C0   8F  BB 000ED         PUSHR   #^M<R6,R7,R8>                                 ;
                                  FCEB   CF            04  FB 000F1         CALLS   #4, CONNECT_LINK                              ;
                                         52            50  D0 000F6         MOVL    R0, STATUS                                    ;
                                         7E       2A   A6  3C 000F9         MOVZWL  42(R6), -(SP)                                 ; 0907
                             00000000G   00            01  FB 000FD         CALLS   #1, SYS$DASSGN                                ;
                    07                52  E8 00104          BLBS    STATUS, 9$                                        ; 0908
                              2C      A6  B4 00107          CLRW    44(R6)                                            ; 0910
                2E  A6                02  88 0010A          BISB2   #2, 46(R6)                                        ; 0911
                    50                52  D0 0010E  9$:     MOVL    STATUS, R0                                        ; 0914
                                          04 00111          RET                                                       ; 0916

; Routine Size:  274 bytes,    Routine Base:  $CODE$ + 0647
;  783          0917  1 ROUTINE WRITE_SLAVE(LNKDESC,OUT_DESC) =
;  784          0918  1 !++
;  785          0919  1 ! FUNCTIONAL DESCRIPTION:
;  786          0920  1 !
;  787          0921  1 !       Write a record to the remote node
;  788          0922  1 !
;  789          0923  1 ! Inputs:
;  790          0924  1 !
;  791          0925  1 !       lnkdesc = address of descriptor of lnk block
;  792          0926  1 !       out_desc = address of descriptor of record to write
;  793          0927  1 !
;  794          0928  1 !
;  795          0929  1 !       Errors are signalled as well as returned.
;  796          0930  1 !--
;  797          0931  2 BEGIN
;  798          0932  2
;  799          0933  2 MAP
;  800          0934  2     LNKDESC : REF $BBLOCK,
;  801          0935  2     OUT_DESC : REF $BBLOCK;
;  802          0936  2
;  803          0937  2 LOCAL
;  804          0938  2     STATUS;
;  805          0939  2
;  806          0940  2 BIND
;  807          0941  2     QIOSB = LNKDESC[LNK_Q_IOSB] : VECTOR[,WORD];
;  808          0942  2
;  809          0943  2 IF .LNKDESC[LNK_V_DEAD]
;  810          0944  2     THEN RETURN FALSE;
;  811          0945  2
;  812        P 0946  2 STATUS = $QIOW(CHAN=.LNKDESC[LNK_W_CHAN],
;  813        P 0947  2                 FUNC=IO$_WRITEVBLK,
;  814        P 0948  2                 IOSB=LNKDESC[LNK_Q_IOSB],
;  815        P 0949  2                 P1=(IF .OUT_DESC[DSC$A_POINTER] NEQ 0
;  816        P 0950  2                         THEN .OUT_DESC[DSC$A_POINTER]
;  817        P 0951  2                         ELSE OUT_DESC),
;  818          0952  2                 P2=.OUT_DESC[DSC$W_LENGTH]);
;  819          0953  2
;  820          0954  2 IF .STATUS
;  821          0955  2     THEN STATUS = .QIOSB[0];
;  822          0956  2
;  823          0957  2 IF NOT .STATUS
;  824          0958  3 THEN BEGIN
;  825          0959  3     SIGNAL(((SS$_PROTOCOL AND NOT STS$M_SEVERITY)
;  826          0960  3                         OR STS$K_ERROR OR MAIL$V_FACILITY),0,.STATUS);
;  827          0961  3     LNKDESC[LNK_V_DEAD] = TRUE;
;  828          0962  2     END;
;  829          0963  2
;  830          0964  2 RETURN .STATUS
;  831          0965  1 END;



                                                    000C 00000 WRITE_SLAVE:
                                                                       .WORD   Save R2,R3                                  ; 0917
                                       52      04   AC  D0 00002       MOVL    LNKDESC, R2                                 ; 0941
```

```
                     55        2E   A2              01  E0 00006           BBS     #1, 46(R2), 5$                           ; 0943
                                                    7E  7C 0000B           CLRQ    -(SP)                                    ; 0952
                                                    7E  7C 0000D           CLRQ    -(SP)                                    ;
                                    50        08    AC  D0 0000F           MOVL    OUT_DESC, R0                             ;
                                    7E              60  3C 00013           MOVZWL  (R0), -(SP)                              ;
                                              04    A0  D5 00016           TSTL    4(R0)                                    ;
                                                    05  13 00019           BEQL    1$                                       ;
                                              04    A0  DD 0001B           PUSHL   4(R0)                                    ;
                                                    06  11 0001E           BRB     2$                                       ;
                                    50        08    AC  9E 00020  1$:      MOVAB   OUT_DESC, R0                             ;
                                                    50  DD 00024           PUSHL   R0                                       ;
                                                    7E  7C 00026  2$:      CLRQ    -(SP)                                    ;
                                              14    A2  9F 00028           PUSHAB  20(R2)                                   ;
                                                    30  DD 0002B           PUSHL   #48                                      ;
                                    7E        2C    A2  3C 0002D           MOVZWL  44(R2), -(SP)                            ;
                                                    7E  D4 00031           CLRL    -(SP)                                    ;
                       00000000G    00              0C  FB 00033           CALLS   #12, SYS$QIOW                            ;
                                    53              50  D0 0003A           MOVL    R0, STATUS                               ;
                                    07              53  E9 0003D           BLBC    STATUS, 3$                               ; 0954
                                    53        14    A2  3C 00040           MOVZWL  20(R2), STATUS                           ; 0955
                                    15              53  E8 00044           BLBS    STATUS, 4$                               ; 0957
                                                    53  DD 00047  3$:      PUSHL   STATUS                                   ; 0960
                                                    7E  D4 00049           CLRL    -(SP)                                    ; 0959
                                        007E2072    8F  DD 0004B           PUSHL   #8265842                                 ;
                       00000000G    00              03  FB 00051           CALLS   #3, LIB$SIGNAL                           ;
                              2E    A2              02  88 00058           BISB2   #2, 46(R2)                               ; 0961
                                    50              53  D0 0005C  4$:      MOVL    STATUS, R0                               ; 0964
                                                        04 0005F           RET                                              ;
                                                    50  D4 00060  5$:      CLRL    R0                                       ; 0965
                                                        04 00062           RET                                              ;

; Routine Size:  99 bytes,    Routine Base:  $CODE$ + 0759
;   833          0966  1 ROUTINE READ_SLAVE(LNKDESC,IN_DESC) =
;   834          0967  1 !++
;   835          0968  1 ! FUNCTIONAL DESCRIPTION:
;   836          0969  1 !
;   837          0970  1 !      Read a record from the remote node
;   838          0971  1 !
;   839          0972  1 ! Inputs:
;   840          0973  1 !
;   841          0974  1 !      lnkdesc = address of lnk block for node
;   842          0975  1 !      in_desc = address of descriptor of buffer
;   843          0976  1 !              length is modified in place to reflect amount actually read
;   844          0977  1 !
;   845          0978  1 !      Errors are signalled as well as returned
;   846          0979  1 !--
;   847          0980  2 BEGIN
;   848          0981  2
;   849          0982  2 MAP
;   850          0983  2     LNKDESC : REF $BBLOCK,
;   851          0984  2     IN_DESC : REF $BBLOCK;
;   852          0985  2 BIND
;   853          0986  2     QIOSB = LNKDESC[LNK_Q_IOSB] : VECTOR[,WORD];
;   854          0987  2
;   855          0988  2 LOCAL
;   856          0989  2     STATUS;
;   857          0990  2
;   858          0991  2 IF .LNKDESC[LNK_V_DEAD]
;   859          0992  2     THEN RETURN FALSE;
;   860          0993  2
;   861        P 0994  2 STATUS = $QIOW(CHAN=.LNKDESC[LNK_W_CHAN],
;   862        P 0995  2                 FUNC=IO$_READVBLK,
;   863        P 0996  2                 IOSB=LNKDESC[LNK_Q_IOSB],
;   864        P 0997  2                 P1=.IN_DESC[DSC$A_POINTER],
;   865          0998  2                 P2=.IN_DESC[DSC$W_LENGTH]);
;   866          0999  2
;   867          1000  2 IN_DESC[DSC$W_LENGTH] = .QIOSB[1];
;   868          1001  2
;   869          1002  2 IF .STATUS
;   870          1003  2     THEN STATUS = .QIOSB[0];
;   871          1004  2
;   872          1005  2 IF NOT .STATUS
;   873          1006  3 THEN BEGIN
;   874          1007  4     SIGNAL((SS$_PROTOCOL AND NOT STS$M_SEVERITY
;   875          1008  3                     OR STS$K_ERROR OR MAIL$V_FACILITY),0,.STATUS);
;   876          1009  3     LNKDESC[LNK_V_DEAD] = TRUE;
;   877          1010  2     END;
;   878          1011  2
;   879          1012  2 RETURN .STATUS
;   880          1013  2
;   881          1014  1 END;



                                        003C 00000 READ_SLAVE:
                                                          .WORD   Save R2,R3,R4,R5                              ; 0966
                        52       04   AC   D0 00002       MOVL    LNKDESC, R2                                   ; 0986
```

```
                   55          14   A2  9E 00006         MOVAB    20(R2), R5                  ;
    4B         2E  A2               01  E0 0000A         BBS      #1, 46(R2), 3$              ; 0991
                                    7E  7C 0000F         CLRQ     -(SP)                       ; 0998
                                    7E  7C 00011         CLRQ     -(SP)                       ;
                   53          08   AC  D0 00013         MOVL     IN_DESC, R3                 ;
                   7E               63  3C 00017         MOVZWL   (R3), -(SP)                 ;
                               04   A3  DD 0001A         PUSHL    4(R3)                       ;
                                    7E  7C 0001D         CLRQ     -(SP)                       ;
                               14   A2  9F 0001F         PUSHAB   20(R2)                      ;
                                    31  DD 00022         PUSHL    #49                         ;
                   7E          2C   A2  3C 00024         MOVZWL   44(R2), -(SP)               ;
                                    7E  D4 00028         CLRL     -(SP)                       ;
        00000000G  00               0C  FB 0002A         CALLS    #12, SYS$QIOW               ;
                   54               50  D0 00031         MOVL     R0, STATUS                  ;
                   63          02   A5  B0 00034         MOVW     2(R5), (R3)                 ; 1000
                   06               54  E9 00038         BLBC     STATUS, 1$                  ; 1002
                   54               65  3C 0003B         MOVZWL   (R5), STATUS                ; 1003
                   15               54  E8 0003E         BLBS     STATUS, 2$                  ; 1005
                                    54  DD 00041 1$:     PUSHL    STATUS                      ; 1008
                                    7E  D4 00043         CLRL     -(SP)                       ; 1007
                         007E2072   8F  DD 00045         PUSHL    #8265842                    ;
        00000000G  00               03  FB 0004B         CALLS    #3, LIB$SIGNAL              ;
               2E  A2               02  88 00052         BISB2    #2, 46(R2)                  ; 1009
                   50               54  D0 00056 2$:     MOVL     STATUS, R0                  ; 1012
                                        04 00059         RET                                  ;
                                    50  D4 0005A 3$:     CLRL     R0                          ; 1014
                                        04 0005C         RET                                  ;

; Routine Size:  93 bytes,    Routine Base:  $CODE$ + 07BC
;  883          1015   1 ROUTINE CHECK_SLAVE_STATUS(LNKDESC) =
;  884          1016   1 !++
;  885          1017   1 ! FUNCTIONAL DESCRIPTION:
;  886          1018   1 !
;  887          1019   1 !       Reads a response from the remote node
;  888          1020   1 !
;  889          1021   1 ! Inputs:
;  890          1022   1 !
;  891          1023   1 !       lnkdesc = address of lnk descriptor for node
;  892          1024   1 !
;  893          1025   1 ! Read from the node, and treat the first 4 bytes as a longword value,
;  894          1026   1 ! indicating success or failure.  If failure, then read and print the
;  895          1027   1 ! error text to follow
;  896          1028   1 !
;  897          1029   1 !--
;  898          1030   2 BEGIN
;  899          1031   2
;  900          1032   2 MAP
;  901          1033   2     LNKDESC : REF $BBLOCK;
;  902          1034   2
;  903          1035   2 LOCAL
;  904          1036   2     STATUS,
;  905          1037   2     DESC : VECTOR[2,LONG],
;  906          1038   2     TMPBUF : $BBLOCK[MAIL$K_INBUFFSZ];
;  907          1039   2
;  908          1040   2 BIND
;  909          1041   2     TMPVEC = TMPBUF : VECTOR[,LONG];
;  910          1042   2
;  911          1043   2 DESC[0] = MAIL$K_INBUFFSZ;
;  912          1044   2 DESC[1] = TMPBUF;
;  913        P 1045   2 IF_ERR(READ_SLAVE(.LNKDESC,DESC);,
;  914          1046   2         RETURN .STATUS);
;  915          1047   2
;  916          1048   2 !
;  917          1049   2 ! Check the first longword read.  If lbs, then return success.
;  918          1050   2 ! Otherwise, call routine to read error text from remote node (until
;  919          1051   2 ! 1 byte record of 0) and then signal it
;  920          1052   2 !
;  921          1053   4 RETURN (IF (STATUS = .TMPVEC[0])
;  922          1054   3                 THEN TRUE
;  923          1055   4                 ELSE (MAIL$READ_ERROR_TEXT(.LNKDESC,READ_SLAVE);
;  924          1056   3                                 .STATUS))
;  925          1057   1 END;



                                                  000C 00000 CHECK_SLAVE_STATUS:
                                                                    .WORD   Save R2,R3                                  ; 1015
            53         9E     AF   9E 00002         MOVAB   READ_SLAVE, R3                             ;
            5E       FDF8     CE   9E 00006         MOVAB   -520(SP), SP                               ;
      F8    AD       0200     8F   3C 0000B         MOVZWL  #512, DESC                                 ; 1043
      FC    AD                6E   9E 00011         MOVAB   TMPBUF, DESC+4                             ; 1044
                       F8     AD   9F 00015         PUSHAB  DESC                                       ; 1046
                       04     AC   DD 00018         PUSHL   LNKDESC                                    ;
            63                02   FB 0001B         CALLS   #2, READ_SLAVE                             ;
```

```
                                   1A            50  E9 0001E         BLBC    STATUS, 3$                          ;
                                   52            6E  D0 00021         MOVL    TMPVEC, STATUS                      ; 1053
                                   05            52  E9 00024         BLBC    STATUS, 1$                          ;
                                   52            01  D0 00027         MOVL    #1, R2                              ;
                                                 0C  11 0002A         BRB     2$                                  ;
                                                 53  DD 0002C  1$:    PUSHL   R3                                  ; 1055
                                         04      AC  DD 0002E         PUSHL   LNKDESC                             ;
                        00000000G  00            02  FB 00031         CALLS   #2, MAIL$READ_ERROR_TEXT            ;
                                   50            52  D0 00038  2$:    MOVL    R2, R0                              ; 1053
                                                     04 0003B  3$:    RET                                         ; 1057

; Routine Size:  60 bytes,    Routine Base:  $CODE$ + 0819
;  927          1058 1 ROUTINE WRITE_CHECK_SLAVE(LNKDESC,OUT_DESC) =
;  928          1059 1 !++
;  929          1060 1 ! FUNCTIONAL DESCRIPTION:
;  930          1061 1 !
;  931          1062 1 !       Write a record to the remote node, and then check the
;  932          1063 1 !       response sent back
;  933          1064 1 !
;  934          1065 1 ! Inputs:
;  935          1066 1 !
;  936          1067 1 !       lnkdesc = address of lnk descriptor
;  937          1068 1 !       outdesc = address of descriptor of record to send
;  938          1069 1 !
;  939          1070 1 ! The record is written to the remote node.  A response is read. If
;  940          1071 1 ! not success, the error text is read and signalled.
;  941          1072 1 !
;  942          1073 1 !--
;  943          1074 2 BEGIN
;  944          1075 2
;  945          1076 2 MAP
;  946          1077 2     LNKDESC : REF $BBLOCK,
;  947          1078 2     OUT_DESC : REF $BBLOCK;
;  948          1079 2
;  949          1080 2 BUILTIN
;  950          1081 2     CALLG,AP;
;  951          1082 2
;  952          1083 2 LOCAL
;  953          1084 2     STATUS;
;  954          1085 2
;  955          1086 3 IF NOT (STATUS = CALLG(.AP,WRITE_SLAVE))
;  956          1087 2     THEN RETURN .STATUS
;  957          1088 2     ELSE RETURN CHECK_SLAVE_STATUS(.LNKDESC)
;  958          1089 1 END;


                                              0000 00000 WRITE_CHECK_SLAVE:
                                                                   .WORD   Save nothing                                  ; 1058
                        FEFD   CF                 6C  FA 00002     CALLG   (AP), WRITE_SLAVE                             ; 1086
                               51                 50  D0 00007     MOVL    R0, STATUS                                    ;
                               04                 50  E8 0000A     BLBS    R0, 1$                                        ;
                               50                 51  D0 0000D     MOVL    STATUS, R0                                    ; 1088
                                                      04 00010     RET                                                   ;
                                          04      AC  DD 00011 1$: PUSHL   LNKDESC                                       ;
                          AC   AF                 01  FB 00014     CALLS   #1, CHECK_SLAVE_STATUS                        ;
                                                      04 00018     RET                                                   ; 1089

; Routine Size:  25 bytes,    Routine Base:  $CODE$ + 0855
;   960           1090  1 GLOBAL ROUTINE MAIL$NET_FROM(LNKDESC,SENDER_DESC) =
;   961           1091  1 !++
;   962           1092  1 ! FUNCTIONAL DESCRIPTION:
;   963           1093  1 !
;   964           1094  1 !       Send the sender's name to a remote node
;   965           1095  1 !
;   966           1096  1 ! Inputs:
;   967           1097  1 !
;   968           1098  1 !       lnkdesc = address of lnk descriptor
;   969           1099  1 !       sender_desc = address of descriptor of sender's name
;   970           1100  1 !
;   971           1101  1 !--
;   972           1102  1
;   973           1103  2 BEGIN
;   974           1104  2
;   975           1105  2 MAP
;   976           1106  2     LNKDESC : REF $BBLOCK,
;   977           1107  2     SENDER_DESC : REF $BBLOCK;
;   978           1108  2
;   979           1109  2 LOCAL
;   980           1110  2     DESC : VECTOR[2,LONG],
;   981           1111  2     STATUS;
;   982           1112  2
;   983           1113  2 BUILTIN
;   984           1114  2     CALLG,AP;
;   985           1115  2
;   986           1116  2 IF .LNKDESC[LNK_V_DEAD]
;   987           1117  2     OR .LNKDESC[LNK_V_FSENT]
;   988           1118  2     THEN RETURN TRUE;
;   989           1119  2
;   990           1120  2 IF .LNKDESC[LNK_V_ALTP]
;   991           1121  3 THEN BEGIN
;   992           1122  3     DESC[0] = .LNKDESC[LNK_B_NODLEN];
;   993           1123  3     DESC[1] = LNKDESC[LNK_T_NODE];
;   994           1124  4     STATUS = (IF .LNKDESC[LNK_L_TFRADR] NEQ 0
;   995           1125  4                 THEN (.LNKDESC[LNK_L_TFRADR])(LNKDESC[LNK_L_CONTEXT],
;   996           1126  4                                     LNK_C_OUT_SENDER,
;   997           1127  4                                     DESC,
;   998           1128  4                                     .SENDER_DESC)
;   999           1129  4                 ELSE TRUE)
;  1000           1130  3     END
;  1001           1131  2 ELSE STATUS = CALLG(.AP,WRITE_SLAVE);
;  1002           1132  2
;  1003           1133  2 LNKDESC[LNK_V_FSENT] = TRUE;
;  1004           1134  2 RETURN .STATUS
;  1005           1135  2
;  1006           1136  1 END;


                                       0000 00000         .ENTRY   MAIL$NET_FROM, Save nothing                  ; 1090
                 5E                 08  C2 00002          SUBL2    #8, SP                                       ;
                 50            04   AC  D0 00005          MOVL     LNKDESC, R0                                  ; 1116
      05      2E A0                 01  E0 00009          BBS      #1, 46(R0), 1$                               ;
      04      2E A0                 03  E1 0000E          BBC      #3, 46(R0), 2$                               ; 1117
```

```
                         50            01  D0 00013 1$:     MOVL     #1, R0                                  ; 1118
                                           04 00016         RET                                          :
              24   2E    A0            02  E1 00017 2$:     BBC      #2, 46(R0), 4$                          ; 1120
                         6E      2F    AC  9A 0001C         MOVZBL   47(R0), DESC                            ; 1122
                   04    AE      30    A0  9E 00020         MOVAB    48(R0), DESC+4                          ; 1123
                                 10    A0  D5 00025         TSTL     16(R0)                                  ; 1124
                                       11  13 00028         BEQL     3$                                      :
                                 08    AC  DD 0002A         PUSHL    SENDER_DESC                             ; 1128
                                 04    AE  9F 0002D         PUSHAB   DESC                                    ; 1125
                                       01  DD 00030         PUSHL    #1                                      :
                                 0C    A0  9F 00032         PUSHAB   12(R0)                                  :
                   10    B0            04  FB 00035         CALLS    #4, @16(R0)                             :
                                       0A  11 00039         BRB      5$                                      :
                         50            01  D0 0003B 3$:     MOVL     #1, STATUS                              ; 1124
                                       05  11 0003E         BRB      5$                                      :
                 FEA6    CF            6C  FA 00040 4$:     CALLG    (AP), WRITE_SLAVE                       ; 1131
                         51      04    AC  D0 00045 5$:     MOVL     LNKDESC, R1                             ; 1133
                   2E    A1            08  88 00049         BISB2    #8, 46(R1)                              :
                                           04 0004D         RET                                          ; 1136

; Routine Size:  78 bytes,    Routine Base:  $CODE$ + 086E
; 1008          1137  1 GLOBAL ROUTINE MAIL$NET_ADDR(LNKDESC,ADDR_DESC) =
; 1009          1138  1 !++
; 1010          1139  1 ! FUNCTIONAL DESCRIPTION:
; 1011          1140  1 !
; 1012          1141  1 !       Check that an addressee exists on a remote node
; 1013          1142  1 !
; 1014          1143  1 ! Inputs:
; 1015          1144  1 !
; 1016          1145  1 !       lnkdesc = address of lnk descriptor for node
; 1017          1146  1 !       addr_desc = address of descriptor of addressee
; 1018          1147  1 !
; 1019          1148  1 ! Returns true if addressee exists, false if not
; 1020          1149  1 !
; 1021          1150  1 !--
; 1022          1151  2 BEGIN
; 1023          1152  2
; 1024          1153  2 MAP
; 1025          1154  2     LNKDESC : REF $BBLOCK,
; 1026          1155  2     ADDR_DESC : REF $BBLOCK;
; 1027          1156  2
; 1028          1157  2 LOCAL
; 1029          1158  2     DESC : VECTOR[2,LONG];
; 1030          1159  2 BUILTIN
; 1031          1160  2     CALLG,AP;
; 1032          1161  2
; 1033          1162  2 IF .LNKDESC[LNK_V_DEAD]
; 1034          1163  2     THEN RETURN FALSE;
; 1035          1164  2
; 1036          1165  2 IF .LNKDESC[LNK_V_ALTP]
; 1037          1166  3 THEN BEGIN
; 1038          1167  3     DESC[0] = .LNKDESC[LNK_B_NODLEN];
; 1039          1168  3     DESC[1] = LNKDESC[LNK_T_NODE];
; 1040          1169  4     RETURN (IF .LNKDESC[LNK_L_TFRADR] EQL 0
; 1041          1170  4                 THEN FALSE
; 1042          1171  4                 ELSE (.LNKDESC[LNK_L_TFRADR])(LNKDESC[LNK_L_CONTEXT],
; 1043          1172  4                                               LNK_C_OUT_CRUSER,
; 1044          1173  4                                               DESC,
; 1045          1174  4                                               .ADDR_DESC,
; 1046          1175  4                                               MAIL$READ_ERROR_TEXT))
; 1047          1176  3     END
; 1048          1177  2 ELSE IF .LNKDESC[LNK_W_CHAN] EQL 0
; 1049          1178  2         THEN RETURN FALSE
; 1050          1179  2         ELSE RETURN CALLG(.AP,WRITE_CHECK_SLAVE)
; 1051          1180  1 END;



                                0000 00000         .ENTRY  MAIL$NET_ADDR, Save nothing             ; 1137
                   5E             08  C2 00002     SUBL2   #8, SP                                   :
                   50       04    AC  D0 00005     MOVL    LNKDESC, R0                              ; 1162
  34         2E    A0             01  E0 00009     BBS     #1, 46(R0), 2$                           :
  24         2E    A0             02  E1 0000E     BBC     #2, 46(R0), 1$                           ; 1165
                   6E       2F    A0  9A 00013     MOVZBL  47(R0), DESC                             ; 1167
             04    AE       30    A0  9E 00017     MOVAB   48(R0), DESC+4                           ; 1168
                            10    A0  D5 0001C     TSTL    16(R0)                                   ; 1169
```

```
                                      21   13 0001F          BEQL    2$                                         ;
                           00000000G  00   9F 00021          PUSHAB  MAIL$READ_ERROR_TEXT                       ; 1171
                                  08  AC   DD 00027          PUSHL   ADDR_DESC                                  ; 1174
                                  08  AE   9F 0002A          PUSHAB  DESC                                       ; 1171
                                      02   DD 0002D          PUSHL   #2                                         ;
                                  0C  A0   9F 0002F          PUSHAB  12(R0)                                     ;
               10    B0               05   FB 00032          CALLS   #5, @16(R0)                                ;
                                           04 00036          RET                                                ; 1177
                                  2C  A0   B5 00037 1$:      TSTW    44(R0)                                     ;
                                      06   13 0003A          BEQL    2$                                         ;
             FF58    CF               6C   FA 0003C          CALLG   (AP), WRITE_CHECK_SLAVE                    ; 1179
                                           04 00041          RET                                                ; 1177
                                      50   D4 00042 2$:      CLRL    R0                                         ; 1180
                                           04 00044          RET                                                ;

; Routine Size:  69 bytes,    Routine Base:  $CODE$ + 08BC
```

```
  1 ROUTINE SEND_MESSAGE(LNKDESC,CNCTDESC) =
  1 !++
  1 ! FUNCTIONAL DESCRIPTION:
  1 !
  1 !       Send text of message to remote node
  1 !
  1 ! Inputs:
  1 !
  1 !       lnkdesc = address of lnk descriptor for remote node
  1 !       cnctdesc = address of cnct descriptor for message
  1 !
  1 !--
  2 BEGIN
  2
  2 MAP
  2     LNKDESC : REF $BBLOCK,
  2     CNCTDESC : REF $BBLOCK;
  2
  2 BIND
  2     RAB = CNCTDESC[CNCT_T_RAB] : $BBLOCK;
  2
  2 LOCAL
  2     STATUS,
  2     DESC : VECTOR[2,LONG];
  2
  2 RAB[RAB$W_USZ] = MAIL$K_INBUFFSZ;
  2 RAB[RAB$L_UBF] = CNCTDESC[CNCT_T_BUFFER];        !Ensure User buffer is right
  2 !
  2 ! ensure rab is connected for BIO if sending in block mode
  2 !
  2 IF .LNKDESC[LNK_V_BLKMODE]
  3 THEN BEGIN
  3     IF NOT .RAB[RAB$V_BIO]
  4     THEN BEGIN
  4         $DISCONNECT(RAB=RAB,ERR=UTIL$REPORT_IO_ERROR);
  4         RAB[RAB$V_BIO] = TRUE;
P 4         IF_ERR($CONNECT(RAB=RAB,ERR=UTIL$REPORT_IO_ERROR);,
  4                 RETURN .STATUS);
  3         END;
  3     !
  3     ! Read from file and write to node until errors or end
  3     !
  3     WHILE (STATUS=$READ(RAB=RAB,ERR=UTIL$REPORT_IO_ERROR)) NEQ RMS$_EOF
  4     DO BEGIN
  4         IF NOT .STATUS THEN RETURN .STATUS;
  4         DESC[0] = .RAB[RAB$W_RSZ];
  4         DESC[1] = .RAB[RAB$L_RBF];
P 4         IF_ERR(WRITE_SLAVE(.[NKDESC,DESC);,
  4                         RETURN .STATUS);
  4         END
  3     END
  3 !
  3 ! Do it with records if we have to.  Make sure rab is connected for
  3 ! record i/o
  3 !
  3 ELSE BEGIN
  3     IF .RAB[RAB$V_BIO]
```

```
; 1110            1238  4       THEN BEGIN
; 1111            1239  4           $DISCONNECT(RAB=RAB,ERR=UTIL$REPORT_IO_ERROR);
; 1112            1240  4           RAB[RAB$V_BIO] = FALSE;
; 1113          P 1241  4           IF_ERR($CONNECT(RAB=RAB,ERR=UTIL$REPORT_IO_ERROR);,
; 1114            1242  4                   RETURN .STATUS);
; 1115            1243  3           END;
; 1116            1244  3       WHILE (STATUS=$GET(RAB=RAB,ERR=UTIL$REPORT_IO_ERROR)) NEQ RMS$_ECF
; 1117            1245  4       DO BEGIN
; 1118            1246  4           IF NOT .STATUS THEN RETURN .STATUS;
; 1119            1247  4           IF .RAB[RAB$W_RSZ] GTRU 255 THEN
; 1120            1248  4                   RETURN SIGNAL(RMS$_RTB,.RAB[RAB$W_RSZ]);
; 1121            1249  4           DESC[0] = .RAB[RAB$W_RSZ];
; 1122            1250  4           DESC[1] = .RAB[RAB$L_RBF];
; 1123            1251  6           IF NOT ((.RAB[RAB$W_RSZ] EQL 1)          !Don't send 1-byte records of 0
; 1124            1252  5               AND (.(.RAB[RAB$L_RBF])<0,8> EQL 0))        ! because they break protocol
; 1125          P 1253  4                   THEN IF_ERR(WRITE_SLAVE(.LNKDESC,DESC);,
; 1126            1254  4                           RETURN .STATUS);
; 1127            1255  3           END;
; 1128            1256  2       END;
; 1129            1257  2 DESC[0] = 1;                            !Make a descriptor
; 1130            1258  2 DESC[1] = DESC[0] + 2;                  ! Describing 1 byte of 0
; 1131            1259  2 RETURN WRITE_SLAVE(.LNKDESC,DESC)            !Send the 1 byte of 0 and return
; 1132            1260  1 END;


                                                                  .EXTRN  SYS$DISCONNECT, SYS$CONNECT
                                                                  .EXTRN  SYS$READ, SYS$GET

                                                01FC 00000 SEND_MESSAGE:
                                                                  .WORD   Save R2,R3,R4,R5,R6,R7,R8                     ; 1181
                           58 00000000G   00   9E 00002           MOVAB   SYS$CONNECT, R8                               :
                           57 00000000G   00   9E 00009           MOVAB   SYS$DISCONNECT, R7                            :
                           56      FE44   CF   9E 00010           MOVAB   WRITE_SLAVE, R6                               :
                           55 00000000G   00   9E 00015           MOVAB   UTIL$REPORT_IO_ERROR, R5                      :
                           5E             08   C2 0001C           SUBL2   #8, SP                                        :
          52        08     AC 00000286    8F   C1 0001F           ADDL3   #646, CNCTDESC, R2                            ; 1200
                    20     A2      0200   8F   B0 00028           MOVW    #512, 32(R2)                                  ; 1206
    24    A2        08     AC 00000086    8F   C1 0002E           ADDL3   #134, CNCTDESC, 36(R2)                        ; 1207
                           54        04   AC   D0 00038           MOVL    LNKDESC, R4                                   ; 1211
          41        2E     A4             04   E1 0003C           BBC     #4, 46(R4), 3$                                :
          10        05     A2             03   E0 00041           BBS     #3, 5(R2), 1$                                 ; 1213
                                          24   BB 00046           PUSHR   #^M<R2,R5>                                    ; 1215
                           67             02   FB 00048           CALLS   #2, SYS$DISCONNECT                            :
                    05     A2             08   88 0004B           BISB2   #8, 5(R2)                                     ; 1216
                                          24   BB 0004F           PUSHR   #^M<R2,R5>                                    ; 1218
                           68             02   FB 00051           CALLS   #2, SYS$CONNECT                               :
                                          28   11 00054           BRB     2$                                            :
                                          24   BB 00056 1$:       PUSHR   #^M<R2,R5>                                    ; 1223
             00000000G     00             02   FB 00058           CALLS   #2, SYS$READ                                  :
                           53             50   D0 0005F           MOVL    R0, STATUS                                    :
             0001827A      8F             53   D1 00062           CMPL    STATUS, #98938                                :
                                          3F   13 00069           BEQL    5$                                            :
                           41             53   E9 0006B           BLBC    STATUS, 6$                                    ; 1225
                           6E        22   A2   3C 0006E           MOVZWL  34(R2), DESC                                  ; 1226
                    04     AE        28   A2   D0 00072           MOVL    40(R2), DESC+4                                ; 1227
                                   4010   8F   BB 00077           PUSHR   #^M<R4,SP>                                    ; 1229
```

```
                                        66             02  FB 0007B          CALLS    #2, WRITE_SLAVE           ;
                                        D5             50  E8 0007E 2$:      BLBS     STATUS, 1$                ;
                                                           04 00081          RET                                ;
                          10        05  A2             03  E1 00082 3$:      BBC      #3, 5(R2), 4$             ; 1237
                                                       24  BB 00087          PUSHR    #^M<R2,R5>                ; 1239
                                        67             02  FB 00089          CALLS    #2, SYS$DISCONNECT        ;
                                    05  A2             08  8A 0008C          BICB2    #8, 5(R2)                 ; 1240
                                                       24  BB 00090          PUSHR    #^M<R2,R5>                ; 1242
                                        68             02  FB 00092          CALLS    #2, SYS$CONNECT           ;
                                                       51  11 00095          BRB      10$                       ;
                                                       24  BB 00097 4$:      PUSHR    #^M<R2,R5>                ; 1244
                             00000000G  00             02  FB 00099          CALLS    #2, SYS$GET               ;
                                        53             50  D0 000A0          MOVL     R0, STATUS                ;
                              0001827A  8F             53  D1 000A3          CMPL     STATUS, #98938            ;
                                                       40  13 000AA 5$:      BEQL     11$                       ;
                                        04             53  E8 000AC          BLBS     STATUS, 7$                ; 1246
                                        50             53  D0 000AF 6$:      MOVL     STATUS, R0                ;
                                                           04 000B2          RET                                ;
                                  00FF  8F         22  A2  B1 000B3 7$:      CMPW     34(R2), #255              ; 1247
                                                       12  1B 000B9          BLEQU    8$                        ;
                                        7E         22  A2  3C 000BB          MOVZWL   34(R2), -(SP)             ; 1248
                                             000181A8  8F  DD 000BF          PUSHL    #98728                    ;
                             00000000G  00             02  FB 000C5          CALLS    #2, LIB$SIGNAL            ;
                                                           04 000CC          RET                                ;
                                        6E         22  A2  3C 000CD 8$:      MOVZWL   34(R2), DESC              ; 1249
                                    04  AE         28  A2  D0 000D1          MOVL     40(R2), DESC+4            ; 1250
                                        01         22  A2  B1 000D6          CMPW     34(R2), #1                ; 1251
                                                       05  12 000DA          BNEQ     9$                        ;
                                                   28  B2  95 000DC          TSTB     @40(R2)                   ; 1252
                                                       B6  13 000DF          BEQL     4$                        ;
                                                 4010  8F  BB 000E1 9$:      PUSHR    #^M<R4,SP>                ; 1254
                                        66             02  FB 000E5          CALLS    #2, WRITE_SLAVE           ;
                                        AC             50  E8 000E8 10$:     BLBS     STATUS, 4$                ;
                                                           04 000EB          RET                                ;
                                        6E             01  D0 000EC 11$:     MOVL     #1, DESC                  ; 1257
                                    04  AE         02  AE  9E 000EF          MOVAB    DESC+2, DESC+4            ; 1258
                                                 4010  8F  BB 000F4          PUSHR    #^M<R4,SP>                ; 1259
                                        66             02  FB 000F8          CALLS    #2, WRITE_SLAVE           ;
                                                           04 000FB          RET                                ; 1260

; Routine Size:  252 bytes,    Routine Base:  $CODE$ + 0901
```

```
1 GLOBAL ROUTINE MAIL$NET_END_USERS(CNCTDESC) : NOVALUE =
1 !++
1 ! FUNCTIONAL DESCRIPTION:
1 !
1 !       Send the end of username flag (byte of 0) and the to-list
1 !       to all the remote nodes that are described by cnctdesc.
1 !
1 ! Inputs:
1 !
1 !       cnctdesc = address of cnct descriptor
1 !
1 !--
2 BEGIN
2 MAP
2     CNCTDESC : REF $BBLOCK;
2
2 LOCAL
2     DESC : VECTOR[2,LONG],
2     LNKDESC : REF $BBLOCK;
2
2 !
2 ! Form a descriptor of a byte of 0
2 !
2 DESC[0] = 1;
2 DESC[1] = DESC[0] + 2;
2 LNKDESC = .(CNCTDESC[CNCT_Q_LNKLST])<0,32,0>;
2 WHILE .LNKDESC NEQ CNCTDESC[CNCT_Q_LNKLST]
3 DO BEGIN
3     IF NOT .LNKDESC[LNK_V_ALTP]          !If sending with decnet
4     THEN BEGIN
4         IF WRITE_SLAVE(.LNKDESC,DESC)    !Send the 1 byte of 0
4             THEN WRITE_SLAVE(.LNKDESC,CNCTDESC[CNCT_Q_TODESC]); !send "to" list
4         END
4     ELSE BEGIN
4         LOCAL
4             NDESC : VECTOR[2,LONG];
4         !
4         ! Send with alternate protocol
4         !
4         IF .LNKDESC[LNK_L_TFRADR] NEQ 0
5         THEN BEGIN
5             NDESC[0] = .LNKDESC[LNK_B_NODLEN];
5             NDESC[1] = LNKDESC[LNK_T_NODE];
5             IF (.LNKDESC[LNK_L_TFRADR])(LNKDESC[LNK_L_CONTEXT],
5                                     LNK_C_OUT_CKUSER,
5                                     NDESC,
5                                     DESC,
5                                     MAIL$READ_ERROR_TEXT)
5                 THEN (.LNKDESC[LNK_L_TFRADR])(LNKDESC[LNK_L_CONTEXT],
5                                     LNK_C_OUT_TO,
5                                     NDESC,
5                                     CNCTDESC[CNCT_Q_TODESC]);
4             END;
3         END;
3     LNKDESC = .LNKDESC[LNK_L_FLINK];
2     END;
2 RETURN;
```

```
; 1191          1318  1 END;


                               001C 00000       .ENTRY   MAIL$NET_END_USERS, Save R2,R3,R4       ; 1261
              54         FD56 CF 9E 00002       MOVAB    WRITE_SLAVE, R4                         ;
              5E              10 C2 00007       SUBL2    #16, SP                                 ;
        08    AE              01 D0 0000A       MOVL     #1, DESC                                ; 1284
        0C    AE           0A AE 9E 0000E       MOVAB    DESC+2, DESC+4                          ; 1285
              53           04 AC D0 00013       MOVL     CNCTDESC, R3                            ; 1286
              52           30 A3 D0 00017       MOVL     48(R3), LNKDESC                         ;
              50           30 A3 9E 0001B 1$:   MOVAB    48(R3), R0                              ; 1287
              50              52 D1 0001F       CMPL     LNKDESC, R0                             ;
                              54 13 00022       BEQL     4$                                      ;
15      2E    A2              02 E0 00024       BBS      #2, 46(LNKDESC), 2$                     ; 1289
                           08 AE 9F 00029       PUSHAB   DESC                                    ; 1291
                              52 DD 0002C       PUSHL    LNKDESC                                 ;
              64              02 FB 0002E       CALLS    #2, WRITE_SLAVE                         ;
              3F              50 E9 00031       BLBC     R0, 3$                                  ;
                           10 A3 9F 00034       PUSHAB   16(R3)                                  ; 1292
                              52 DD 00037       PUSHL    LNKDESC                                 ;
              64              02 FB 00039       CALLS    #2, WRITE_SLAVE                         ;
                              35 11 0003C       BRB      3$                                      ; 1289
                           10 A2 D5 0003E 2$:   TSTL     16(LNKDESC)                             ; 1300
                              30 13 00041       BEQL     3$                                      ;
              6E           2F A2 9A 00043       MOVZBL   47(LNKDESC), NDESC                      ; 1302
        04    AE           30 A2 9E 00047       MOVAB    48(R2), NDESC+4                         ; 1303
                    00000000G 00 9F 0004C       PUSHAB   MAIL$READ_ERROR_TEXT                    ; 1304
                           0C AE 9F 00052       PUSHAB   DESC                                    ;
                           08 AE 9F 00055       PUSHAB   NDESC                                   ;
                              02 DD 00058       PUSHL    #2                                      ;
                           0C A2 9F 0005A       PUSHAB   12(LNKDESC)                             ;
        10    B2              05 FB 0005D       CALLS    #5, @16(LNKDESC)                        ;
              0F              50 E9 00061       BLBC     R0, 3$                                  ;
                           10 A3 9F 00064       PUSHAB   16(R3)                                  ; 1312
                           04 AE 9F 00067       PUSHAB   NDESC                                   ; 1309
                              03 DD 0006A       PUSHL    #3                                      ; 1312
                           0C A2 9F 0006C       PUSHAB   12(LNKDESC)                             ; 1309
        10    B2              04 FB 0006F       CALLS    #4, @16(LNKDESC)                        ; 1312
              52              62 D0 00073 3$:   MOVL     (LNKDESC), LNKDESC                      ; 1315
                              A3 11 00076       BRB      1$                                      ; 1287
                                 04 00078 4$:   RET                                              ; 1318

; Routine Size:  121 bytes,    Routine Base:  $CODE$ + 09FD
```

```
   1 GLOBAL ROUTINE MAIL$NET_SEND(ADRDESC,CNCTDESC) =
   1 !++
   1 ! FUNCTIONAL DESCRIPTION:
   1 !
   1 !      Send a message to the remote node.  The complete message is only sent
   1 !      the first time.  After the message is sent, and each additional call
   1 !      for a particular node, only the slave status is checked for each
   1 !      addressee.
   1 !
   1 ! Inputs:
   1 !
   1 !      adrdesc = address of addressee descriptor
   1 !      cnctdesc = address of cnct descriptor
   1 !
   1 !--
   2 BEGIN
   2
   2 MAP
   2     ADRDESC : REF $BBLOCK,
   2     CNCTDESC : REF $BBLOCK;
   2
   2 BIND
   2     LNKDESC = ADRDESC[ADR_L_LLNK] : REF $BBLOCK,
   2     SUBJDESC = CNCTDESC[CNCT_Q_SUBJDESC] : $BBLOCK;
   2
   2 LOCAL
   2     UDESC : VECTOR[2,LONG],
   2     NDESC : VECTOR[2,LONG],
   2     DESC : VECTOR[2,LONG];
   2
   2 IF .LNKDESC[LNK_V_DEAD]
   2     THEN RETURN FALSE;
   2
   2 !
   2 ! If the message hasn't been sent to this node yet, then
   2 ! send it now
   2 !
   2 NDESC[0] = .LNKDESC[LNK_B_NODLEN];
   2 NDESC[1] = LNKDESC[LNK_T_NODE];
   2 UDESC[0] = .ADRDESC[ADR_B_NAMLNG];
   2 UDESC[1] = ADRDESC[ADR_T_NAME];
   2 IF NOT .LNKDESC[LNK_V_MSGSNT]
   3 THEN BEGIN
   3     DESC[0] = .SUBJDESC[DSC$W_LENGTH];
   3     IF .DESC[0] NEQ 0
   3         THEN DESC[1] = .SUBJDESC[DSC$A_POINTER]
   3         ELSE DESC[1] = DESC[0];
   3     IF NOT .LNKDESC[LNK_V_ALTP]          !If sending with decnet
   4     THEN BEGIN
P  4         IF_ERR(WRITE_SLAVE(.LNKDESC,DESC);,
   4                                 RETURN .STATUS);
   4         !
   4         ! Now send text of message
   4         !
P  4         IF_ERR(SEND_MESSAGE(.LNKDESC,.CNCTDESC);,
   4                 RETURN .STATUS);
   4         LNKDESC[LNK_V_MSGSNT] = TRUE;
```

```
; 1250          1376  4           END
; 1251          1377  4       ELSE BEGIN
; 1252          1378  4           !
; 1253          1379  4           ! Send with alternate protocol
; 1254          1380  4           !
; 1255          1381  4           IF .LNKDESC[LNK_L_TFRADR] EQL 0
; 1256          1382  4               THEN RETURN TRUE;
; 1257        P 1383  4           IF_ERR((.LNKDESC[LNK_L_TFRADR])(LNK'DESC[LNK_L_CONTEXT],
; 1258        P 1384  4                                     LNK_C_OUT_SUBJ,
; 1259        P 1385  4                                     NDESC,
; 1260        P 1386  4                                     DESC);,
; 1261          1387  4                   RETURN .STATUS);
; 1262        P 1388  4           IF_ERR((.LNKDESC[LNK_L_TFRADR])(LNKDESC[LNK_L_CONTEXT],
; 1263        P 1389  4                                     LNK_C_OUT_FILE,
; 1264        P 1390  4                                     NDESC,
; 1265        P 1391  4                                     CNCTDESC[CNCT_T_RAB],
; 1266        P 1392  4                                     UTIL$REPORT_IO_ERROR);,
; 1267          1393  4                   RETURN .STATUS);
; 1268          1394  4           LNKDESC[LNK_V_MSGSNT] = TRUE;
; 1269          1395  3           END;
; 1270          1396  2       END;
; 1271          1397  2 !
; 1272          1398  2 ! See how the send went to this user
; 1273          1399  2 !
; 1274          1400  3 RETURN (IF NOT .LNKDESC[LNK_V_ALTP]
; 1275          1401  3             THEN CHECK_SLAVE_STATUS(.LNKDESC)
; 1276          1402  3             ELSE (.LNKDESC[LNK_L_TFRADR])(LNKDESC[LNK_L_CONTEXT],
; 1277          1403  3                                         LNK_C_OUT_CRSEND,
; 1278          1404  3                                         NDESC,
; 1279          1405  3                                         UDESC,
; 1280          1406  3                                         MAIL$READ_ERROR_TEXT))
; 1281          1407  1 END;



                               001C 00000          .ENTRY  MAIL$NET_SEND, Save R2,R3,R4                       ; 1319
               54      FCDD   CF   9E 00002          MOVAB   WRITE_SLAVE, R4                                    ;
               5E             18   C2 00007          SUBL2   #24, SP                                            ;
               50       04    AC   D0 0000A          MOVL    ADRDESC, R0                                        ; 1341
    51     08  AC             18   C1 0000E          ADDL3   #24, CNCTDESC, R1                                  ; 1342
               52       08    A0   D0 00013          MOVL    8(R0), R2                                          ; 1349
               53       2E    A2   9E 00017          MOVAB   46(R2), R3                                         ;
    03         63             01   E1 0001B          BBC     #1, (R3), 1$                                       ;
                            00A0   31 0001F          BRW     9$                                                 ;
           08  AE       2F    A2   9A 00022 1$:      MOVZBL  47(R2), NDESC                                      ; 1356
           0C  AE       30    A2   9E 00027          MOVAB   48(R2), NDESC+4                                    ; 1357
           10  AE       1D    A0   9A 0002C          MOVZBL  29(R0), UDESC                                      ; 1358
           14  AE       1E    A0   9E 00031          MOVAB   30(R0), UDESC+4                                    ; 1359
               67             63   E8 00036          BLBS    (R3), 7$                                           ; 1360
               6E             61   3C 00039          MOVZWL  (R1), DESC                                         ; 1362
                              07   13 0003C          BEQL    2$                                                 ; 1363
           04  AE       04    A1   D0 0003E          MOVL    4(R1), DESC+4                                      ; 1364
                              04   11 00043          BRB     3$                                                 ;
           04  AE             6E   9E 00045 2$:      MOVAB   DESC, DESC+4                                       ; 1365
    18         63             02   E0 00049 3$:      BBS     #2, (R3), 4$                                       ; 1366
```

```
                                               4004   8F  BB 0004D           PUSHR   #^M<R2,SP>                                    ; 1369
                                        64            02  FB 00051           CALLS   #2, WRITE_SLAVE                               ;
                                        6D            50  E9 00054           BLBC    STATUS, 10$                                   ;
                                                 08   AC  DD 00057           PUSHL   CNCTDESC                                      ; 1374
                                                      52  DD 0005A           PUSHL   R2                                            ;
                                01A8    C4            02  FB 0005C           CALLS   #2, SEND_MESSAGE                              ;
                                        39            50  E8 00061           BLBS    STATUS, 6$                                    ;
                                                          04 00064           RET                                                   ; 1375
                                                 10   A2  D5 00065 4$:       TSTL    16(R2)                                        ; 1381
                                                      04  12 00068           BNEQ    5$                                            ;
                                        50            01  D0 0006A           MOVL    #1, R0                                        ; 1382
                                                          04 0006D           RET                                                   ;
                                                      5E  DD 0006E 5$:       PUSHL   SP                                            ; 1387
                                                 0C   AE  9F 00070           PUSHAB  NDESC                                         ;
                                                      04  DD 00073           PUSHL   #4                                            ;
                                                 0C   A2  9F 00075           PUSHAB  12(R2)                                        ;
                                   10   B2            04  FB 00078           CALLS   #4, @16(R2)                                   ;
                                        45            50  E9 0007C           BLBC    STATUS, 10$                                   ;
                                           00000000G  00  9F 0007F           PUSHAB  UTIL$REPORT_IO_ERROR                          ; 1393
                         7E        08   AC 00000286   8F  C1 00085           ADDL3   #646, CNCTDESC, -(SP)                         ;
                                                 10   AE  9F 0008E           PUSHAB  NDESC                                         ;
                                                      05  DD 00J91           PUSHL   #5                                            ;
                                                 0C   A2  9F 00093           PUSHAB  12(R2)                                        ;
                                   10   B2            05  FB 00096           CALLS   #5, @16(R2)                                   ;
                                        27            50  E9 0009A           BLBC    STATUS, 10$                                   ;
                                        63            01  88 0009D 6$:       BISB2   #1, (R3)                                      ; 1394
                         08             63            02  E0 000A0 7$:       BBS     #2, (R3), 8$                                  ; 1400
                                                      52  DD 000A4           PUSHL   R2                                            ; 1401
                                00C0    C4            01  FB 000A6           CALLS   #1, CHECK_SLAVE_STATUS                        ;
                                                          04 000AB           RET                                                   ;
                                           00000000G  00  9F 000AC 8$:       PUSHAB  MAIL$READ_ERROR_TEXT                          ; 1402
                                                 14   AE  9F 000B2           PUSHAB  UDESC                                         ;
                                                 10   AE  9F 000B5           PUSHAB  NDESC                                         ;
                                                      06  DD 000B8           PUSHL   #6                                            ;
                                                 0C   A2  9F 000BA           PUSHAB  12(R2)                                        ;
                                   10   B2            05  FB 000BD           CALLS   #5, @16(R2)                                   ;
                                                          04 000C1           RET                                                   ; 1400
                                                      50  D4 000C2 9$:       CLRL    R0                                            ; 1407
                                                          04 000C4 10$:      RET                                                   ;

; Routine Size:  197 bytes,    Routine Base:  $CODE$ + 0A76
; 1283          1408  1 GLOBAL ROUTINE MAIL$READ_FOREIGN_FILE(OUTRAB) =
; 1284          1409  1 !++
; 1285          1410  1 ! FUNCTIONAL DESCRIPTION:
; 1286          1411  1 !
; 1287          1412  1 !       Calls a foreign net protocol routine to read message text
; 1288          1413  1 !       from the remote node and store it in the output file
; 1289          1414  1 !
; 1290          1415  1 !--
; 1291          1416  2 BEGIN
; 1292          1417  2 MAP
; 1293          1418  2     OUTRAB : $BBLOCK;
; 1294          1419  2
; 1295          1420  2 RETURN (.LINK_TFRADR)(LINK_CONTEXT,LNK_C_IN_FILE,0,.OUTRAB,
; 1296          1421  2                         UTIL$REPORT_IO_ERROR)
; 1297          1422  1 END;



                                    0000 00000        .ENTRY  MAIL$READ_FOREIGN_FILE, Save nothing          ; 1408
                 50 00000000'   00  D0 00002        MOVL    LINK_TFRADR, R0                                  ; 1420
                    00000000G   00  9F 00009        PUSHAB  UTIL$REPORT_IO_ERROR                             ;
                           04   AC  DD 0000F        PUSHL   OUTRAB                                           ;
                 7E             0D  7D 00012        MOVQ    #13, -(SP)                                       ;
                    00000000'   00  9F 00015        PUSHAB  LINK_CONTEXT                                     ;
                 60             05  FB 0001B        CALLS   #5, (R0)                                         ;
                                    04 0001E        RET                                                      ; 1422

; Routine Size:  31 bytes,    Routine Base:  $CODE$ + 0B3B
```

```
1 ROUTINE ACCEPT_LINK =
1 !++
1 ! FUNCTIONAL DESCRIPTION:
1 !
1 !       Accept a connection from a remote node
1 !
1 ! Inputs:
1 !
1 !       none
1 !
1 ! Implicit inputs:
1 !
1 !       network server data base and own storage
1 !--
2 BEGIN
2 LOCAL
2     STATUS,
2     RMSRAT,
2     RMSRFM,
2     PFLAGS,
2     PTR : REF VECTOR[,BYTE],
2     PTR1 : REF $BBLOCK,
2     LEN,
2     QIOSB : VECTOR[4,WORD];
2
2 LINK_CHAN = 0;
2 MAIL$G_CNCT[CNCT_B_FILRAT] = FAB$M_CR;
2 MAIL$G_CNCT[CNCT_B_FILRFM] = FAB$C_VAR;
2 IF .MAIL$Q_PROTOCO[DSC$W_LENGTH] EQL 0
3 THEN BEGIN
3     !
3     ! See if SYS$NET translated is a DECnet NCB.  If so, decode the
3     ! NCB and store in CNCT
3     !
3     IF NOT CH$FAIL(PTR = CH$FIND_CH(.MAIL$Q_INPTRAN[DSC$W_LENGTH],
3                         .MAIL$Q_INPTRAN[DSC$A_POINTER],%C'/'))
4     THEN BEGIN
4         LEN = .PTR - .MAIL$Q_INPTRAN[DSC$A_POINTER] - 4;        !"/", word, cnt count
4         PTR = .PTR + 3;                                 !Skip to cnf count
4         PTR1 = PTR[1];                                  !PTR1 points to cnfdata
4         IF .LEN-CNF_C_LENGTH GEQU 0
4             AND .PTR[0] EQL CNF_C_LENGTH
4             AND .PTR1[CNF_B_VERSION] GEQU CNF_C_VERS
4             AND .PTR1[CNF_B_ECO] GEQU CNF_C_ECO
5         THEN BEGIN
5             !
5             ! It seems to be a valid CNF from another MAIL.  Store away the
5             !  info and modify accordingly
5             !
5             PTR1[CNF_V_PFXSEND] = 0;           !Clear his bit
5             PTR1[CNF_V_CCSEND] = 0;            !Clear his bit
5             PTR1[CNF_B_VERSION] = CNF_C_VERS;  !Send back our protocol ver
5             PTR1[CNF_B_ECO] = CNF_C_ECO;       ! and eco level
5             IF .PTR1[CNF_V_BLKSEND]            !Sending block mode?
6             THEN BEGIN
6                 PTR1[CNF_V_BLKSEND] = 0;       !Clear his send bit
6                 PTR1[CNF_V_BLKRECV] = 1;       !Set my receive bit
```

```
  6                  MAIL$G_CNCT[CNCT_B_FILRFM] = .PTR1[CNF_B_RFM];
  6                  MAIL$G_CNCT[CNCT_B_FILRAT] = .PTR1[CNF_B_RAT];
  6                  MAIL$G_CNCT[CNCT_V_BLKMODE] = TRUE;
  6                  PTR1[CNF_B_RFM] = 1;            !Will send 1 block at a time
  5                  END;
  4              END;
  3          END;
  3      !
  3      ! Assign a channel to _NET:.  Then attempt to accept the connection.
  3      ! If that fails, then give up.
  3      !
  4      IF (STATUS = LIB$ASN_WTH_MBX(NETACP_DESC,
  4                              MAIL$L_MBXBUF,MAIL$L_MBXQUO,LINK_CHAN,
  4                              NETMBX_CHAN))
P 5          AND ((STATUS = $QIOW(FUNC=IO$_ACCESS,
P 5                          CHAN=.LINK_CHAN,
P 5                          IOSB=QIOSB,
  5                          P2=MAIL$Q_INPTRAN))
  4              AND (STATUS = .QIOSB[0]))
  4      THEN ($DASSGN(CHAN=.NETMBX_CHAN); RETURN TRUE)                  !All done if DECnet
  4      ELSE BEGIN
  4          $DASSGN(CHAN=.NETMBX_CHAN);
  4          MAIL$G_CNCT[CNCT_V_B[KMODE] = FALSE;
  4          RETURN .STATUS;
  3          END;
  3      END
  3  ELSE BEGIN
  3      !
  3      ! The /protocol qualifier was used in starting up inbound network
  3      ! mail.  Merge in the specified file and use it.
  3      !
  3      PFLAGS = 0;
P 3      IF_ERR(LIB$FIND_IMAGE_SYMBOL(MAIL$Q_PROTOCOL,PROT_DESC,LINK_TFRADR);,
  3                  RETURN .STATUS);
P 3      IF_ERR(CHECK_PROTOCOL_VERSION(MAIL$Q_PROTOCOL);,
  3                  RETURN .STATUS);
P 3      IF_ERR((.LINK_TFRADR)(LINK_CONTEXT,
P 3                                          LNK_C_IN_CONNECT,
P 3                                          MAI[$Q_INPTRAN,
P 3                                          RMSRAT,RMSRFM,
P 3                                          .MAIL$GL_SYSFLAGS<16,16,0>,
P 3                                          MAIL$Q_PROTOCOL,
P 3                                          PFLAGS];,
  3                  RETURN .STATUS);
  3      LINK_CHAN = MAIL$GL_FLAGS[MAIF_V_ALTP] = 1;
  3      MAIL$G_CNCT[CNCT_B_FILRFM] = .RMSRFM;
  3      MAIL$G_CNCT[CNCT_B_FILRAT] = .RMSRAT;
  3      MAIL$G[_FLAGS[MAIF_V_SERVERLOOP] = .PFLAGS<0,1,0>;
  3      RETURN TRUE
  2      END;
  1  END;
```

```
                                    01FC 00000 ACCEPT_LINK:
```

```
                                                     .WORD    Save R2,R3,R4,R5,R6,R7,R8                       ; 1423
               58  00000000G   00  9E 00002          MOVAB    SYS$DASSGN, R8
               57       F4C9   CF  9E 00009          MOVAB    NETACP_DESC, R7
               56  00000000G   00  9E 0000E          MOVAB    MAIL$Q_INPTRAN, R6
               55  00000000G   00  9E 00015          MOVAB    MAIL$Q_PROTOCOL, R5
               54  00000000G   00  9E 0001C          MOVAB    MAIL$G_CNCT+128, R4
               53  00000000'   00  9E 00023          MOVAB    LINK_CHAN, R3
               5E              14  C2 0002A          SUBL2    #20, SP
                               63  D4 0002D          CLRL     LINK_CHAN                                       ; 1448
               64       0202   8F  B0 0002F          MOVW     #514, MAIL$G_CNCT+128                           ; 1449
                               65  B5 00034          TSTW     MAIL$Q_PROTOCOL                                 ; 1451
                               03  13 00036          BEQL     1$
                             00AE  31 00038          BRW      5$
               52         04   A6  D0 0003B 1$:      MOVL     MAIL$Q_INPTRAN+4, R2                            ; 1458
62             66              2F  3A 0003F          LOCC     #47, MAIL$Q_INPTRAN, (R2)                       ; 1457
                               02  12 00043          BNEQ     2$
                               51  D4 00045          CLRL     R1
               50              51  D0 00047 2$:      MOVL     R1, PTR
                               40  13 0004A          BEQL     3$                                              ; 1458
51             50              52  C3 0004C          SUBL3    R2, PTR, R1                                     ; 1460
               52         FC   A1  9E 00050          MOVAB    -4(R1), LEN
               50              03  C0 00054          ADDL2    #3, PTR                                         ; 1461
               51         01   A0  9E 00057          MOVAB    1(R0), PTR1                                     ; 1462
               52              10  C2 0005B          SUBL2    #16, R2                                         ; 1463
               10              60  91 0005E          CMPB     (PTR), #16                                      ; 1464
                               29  12 00061          BNEQ     3$
               03              61  91 00063          CMPB     (PTR1), #3                                      ; 1465
                               24  1F 00066          BLSSU    3$
               50         08   A1  9E 00068          MOVAB    8(PTR1), R0                                     ; 1472
               60              14  8A 0006C          BICB2    #20, (R0)                                       ; 1473
               61              03  B0 0006F          MOVW     #3, (PTR1)                                      ; 1474
               17              60  E9 00072          BLBC     (R0), 3$                                        ; 1476
               60              01  8A 00075          BICB2    #1, (R0)                                        ; 1478
               60              02  88 00078          BISB2    #2, (R0)                                        ; 1479
          01   A4         0C   A1  90 0007B          MOVB     12(PTR1), MAIL$G_CNCT+129                       ; 1480
               64         0D   A1  90 00080          MOVB     13(PTR1), MAIL$G_CNCT+128                       ; 1481
          04   A4              04  88 00084          BISB2    #4, MAIL$G_CNCT+T32                             ; 1482
          0C   A1              01  90 00088          MOVB     #1, 12(PTRT)                                    ; 1483
                          0C   A3  9F 0008C 3$:      PUSHAB   NETMBX_CHAN                                     ; 1491
                               53  DD 0008F          PUSHL    R3
                   00000000'   00  9F 00091          PUSHAB   MAIL$L_MBXQUO
                   00000000'   00  9F 00097          PUSHAB   MAIL$L_MBXBUF
                               57  DD 0009D          PUSHL    R7
   00000000G   00              05  FB 0009F          CALLS    #5, LIB$ASN_WTH_MBX
               52              50  D0 000A6          MOVL     R0, STATUS
               2F              52  E9 000A9          BLBC     STATUS, 4$
                               7E  7C 000AC          CLRQ     -(SP)                                           ; 1497
                               7E  7C 000AE          CLRQ     -(SP)
                               56  DD 000B0          PUSHL    R6
                               7E  7C 000B2          CLRQ     -(SP)
                               7E  D4 000B4          CLRL     -(SP)
                          2C   AE  9F 000B6          PUSHAB   QIOSB
                               32  DD 000B9          PUSHL    #50
                               63  DD 000BB          PUSHL    LINK_CHAN
                               7E  D4 000BD          CLRL     -(SPT
   00000000G   00              0C  FB 000BF          CALLS    #12, SYS$QIOW
               52              50  D0 000C6          MOVL     R0, STATUS
```

```
                                        0F            52  E9 000C9         BLBC    STATUS, 4$                                   ;
                                        52        0C  AE  3C 0C0CC         MOVZWL  QIOSB, STATUS                                ; 1498
                                        08            52  E9 000D0         BLBC    STATUS, 4$                                   ;
                                                  0C  A3  DD 000D3         PUSHL   NETMBX_CHAN                                  ; 1499
                                        68            01  FB 000D6         CALLS   #1, SYS$DASSGN                               ;
                                                      6A  11 000D9         BRB     6$                                           ; 1500
                                                  0C  A3  DD 000DB 4$:     PUSHL   NETMBX_CHAN                                  ; 1501
                                        68            01  FB 000DE         CALLS   #1, SYS$DASSGN                               ;
                                    04  A4            04  8A 000E1         BICB2   #4, MAIL$G_CNCT+132                          ; 1502
                                        50            52  D0 000E5         MOVL    STATUS, R0                                   ; 1503
                                                          04 000E8         RET                                                  ; 1506
                                                      6E  D4 000E9 5$:     CLRL    PFLAGS                                       ; 1511
                                                  04  A3  9F 000EB         PUSHAB  LINK_TFRADR                                  ; 1513
                                                  E0  A7  9F 000EE         PUSHAB  PROT_DESC                                    ;
                                                      55  DD 000F1         PUSHL   R5                                           ;
                             00000000G  00            03  FB 000F3         CALLS   #3, LIB$FIND_IMAGE_SYMBOL                    ;
                                        4B            50  E9 000FA         BLBC    STATUS, 7$                                   ;
                                                      55  DD 000FD         PUSHL   R5                                           ; 1515
                                  F6A2  CF            01  FB 000FF         CALLS   #1, CHECK_PROTOCOL_VERSION                   ;
                                        41            50  E9 00104         BLBC    STATUS, 7$                                   ;
                                        50        04  A3  D0 00107         MOVL    LINK_TFRADR, R0                              ; 1523
                                                4020  8F  BB 0010B         PUSHR   #^M<R5,SP>                                   ;
                                        7E 00000000G  00  3C 0010F         MOVZWL  MAIL$GL_SYSFLAGS+2, -(SP)                    ;
                                                  10  AE  9F 00116         PUSHAB  RMSRFM                                       ;
                                                  18  AE  9F 00119         PUSHAB  RMSRAT                                       ;
                                                      56  DD 0011C         PUSHL   R6                                           ;
                                                      08  DD 0011E         PUSHL   #8                                           ;
                                                  08  A3  9F 00120         PUSHAB  LINK_CONTEXT                                 ;
                                        60            08  FB 00123         CALLS   #8, (R0)                                     ;
                                        1F            50  E9 00126         BLBC    STATUS, 7$                                   ;
                             00000000G  00            04  88 00129         BISB2   #4, MAIL$GL_FLAGS+1                          ; 1524
                                        63            01  D0 00130         MOVL    #1, LINK_CHAN                                ;
                                    01  A4        04  AE  90 00133         MOVB    RMSRFM, MAIL$G_CNCT+129                      ; 1525
                                        64        08  AE  90 00138         MOVB    RMSRAT, MAIL$G_CNCT+128                      ; 1526
00000000G  00            01             02            6E  F0 0013C         INSV    PFLAGS, #2, #1, MAIL$GL_FLAGS+2              ; 1527
                                        50            01  D0 00145 6$:     MOVL    #1, R0                                       ; 1528
                                                          04 00148 7$:     RET                                                  ; 1530

; Routine Size:  329 bytes,    Routine Base:  $CODE$ + 0B5A
; 1408          1531   1 GLOBAL ROUTINE MAIL$GET_INPUT (OUT_DESC,PROMPT_DESC,OUTLEN) =
; 1409          1532   1 !++
; 1410          1533   1 ! FUNCTIONAL DESCRIPTION:
; 1411          1534   1 !
; 1412          1535   1 !       If non-network, read from SYS$INPUT.  If network, read from
; 1413          1536   1 !       network link
; 1414          1537   1 !
; 1415          1538   1 ! Inputs:
; 1416          1539   1 !
; 1417          1540   1 !       out_desc = address of dynamic desciptor for output string
; 1418          1541   1 !       prompt_desc = address of prompt descriptor
; 1419          1542   1 !
; 1420          1543   1 !--
; 1421          1544   2 BEGIN
; 1422          1545   2
; 1423          1546   2 MAP
; 1424          1547   2     OUTLEN : REF VECTOR[,WORD];
; 1425          1548   2
; 1426          1549   2 BUILTIN
; 1427          1550   2     NULLPARAMETER;
; 1428          1551   2
; 1429          1552   2 LOCAL
; 1430          1553   2     TEMPLEN : WORD,
; 1431          1554   2     STATUS;
; 1432          1555   2
; 1433          1556   2 BIND
; 1434          1557   2     QIOSB = MAIL$G_CNCT[CNCT_Q_IOSB] : VECTOR[,WORD];
; 1435          1558   2
; 1436          1559   2 IF .MAIL$GL_FLAGS[MAIF_V_NETJOB]
; 1437          1560   3 THEN BEGIN
; 1438          1561   3     !
; 1439          1562   3     ! Accept the link if it hasn't been already.
; 1440          1563   3     !
; 1441          1564   3     IF .LINK_CHAN EQL 0
; 1442        P 1565   3         THEN IF_ERR(ACCEPT_LINK();,
; 1443          1566   3                         RETURN .STATUS);
; 1444          1567   3     IF NOT .MAIL$GL_FLAGS[MAIF_V_ALTP]
; 1445          1568   4     THEN BEGIN
; 1446          1569   4         !
; 1447          1570   4         ! For decnet, read the buffer.  Then copy to the output buffer
; 1448          1571   4         !
; 1449        P 1572   4         STATUS = $QIOW(CHAN=.LINK_CHAN,
; 1450        P 1573   4                         FUNC=IO$_READVBLK,
; 1451        P 1574   4                         IOSB=QIOSB,
; 1452        P 1575   4                         P1=MAIL$G_CNCT[CNCT_T_BUFFER],
; 1453          1576   4                         P2=MAIL$K_INBUFFSZ);
; 1454          1577   4         IF .STATUS
; 1455          1578   4             THEN STATUS = .QIOSB[0];
; 1456          1579   4         IF NOT .STATUS
; 1457          1580   4             THEN RETURN .STATUS;
; 1458          1581   4         LIB$SCOPY_R_DX(QIOSB[1],MAIL$G_CNCT[CNCT_T_BUFFER],.OUT_DESC);
; 1459          1582   4         RETURN TRUE
; 1460          1583   4         END
; 1461          1584   4     !
; 1462          1585   4     ! For foreign net, let it's routine do the copy, too
; 1463          1586   4     !
; 1464          1587   3     ELSE RETURN (.LINK_TFRADR)(LINK_CONTEXT,.PROMPT_DESC,.OUT_DESC);
; 1465          1588  3         END
; 1466          1589  3     ELSE BEGIN
; 1467          1590  3         !
; 1468          1591  3         ! Not network job.
; 1469          1592  3         !
; 1470          1593  3         STATUS = SMG$READ_COMPOSED_LINE(MAIL$L_SMG_KEYBOARD,
; 1471          1594  3                                          MAIL$L_SMG_KEYTABLE,
; 1472          1595  3                                          .OUT_DESC,.PROMPT_DESC,TEMPLEN);
; 1473          1596  3         IF .STATUS EQL SMG$_EOF
; 1474          1597  3             THEN STATUS = RMS$_EOF;
; 1475          1598  4         IF (.STATUS EQL RMS$_TNS)
; 1476          1599  4             OR (.STATUS EQL SS$_DATAOVERUN)
; 1477          1600  3             THEN STATUS = SS$_NORMAL;
; 1478          1601  3         IF .MAIL$GL_FLAGS[MAIF_V_CTRLCFL]
; 1479          1602  4             THEN (STATUS = RMS$_EOF;
; 1480          1603  3                     MAIL$GL_FLAGS[MAIF_V_CTRLCFL] = 0);
; 1481          1604  3         IF NOT NULLPARAMETER(3)
; 1482          1605  3             AND .STATUS
; 1483          1606  3             THEN OUTLEN[0] = .TEMPLEN;
; 1484          1607  3         IF NOT .STATUS
; 1485          1608  4             AND (.STATUS NEQ RMS$_EOF)
; 1486          1609  3             THEN SIGNAL(MAIL$_READERR,1,MAIL$Q_INPTRAN,.STATUS);
; 1487          1610  3         RETURN .STATUS
; 1488          1611  2         END;
; 1489          1612  2
; 1490          1613  1     END;



                                              003C 00000          .ENTRY  MAIL$GET_INPUT, Save R2,R3,R4,R5            ; 1531
                 55 00000000G       00    9E 00002          MOVAB   MAIL$GL_FLAGS, R5                           ;
                 54 00000000'       00    9E 00009          MOVAB   LINK_CHAN, R4                               ;
                 53 00000000G       00    9E 00010          MOVAB   MAIL$G_CNCT+134, R3                         ;
                 5E                 04    C2 00017          SUBL2   #4, SP                                      ;
       63        65                 01    E1 0001A          BBC     #1, MAIL$GL_FLAGS, 5$                       ; 1559
                                    64    D5 0001E          TSTL    LINK_CHAN                                   ; 1564
                                    09    12 00020          BNEQ    1$                                          ;
            FE90 CF                 00    FB 00022          CALLS   #0, ACCEPT_LINK                             ; 1566
                 01                 50    E8 00027          BLBS    STATUS, 1$                                  ;
                                          04 0002A          RET                                                 ;
       40     01 A5                 02    E0 0002B 1$:      BBS     #2, MAIL$GL_FLAGS+1, 4$                     ; 1567
                                    7E    7C 00030          CLRQ    -(SP)                                       ; 1576
                                    7E    7C 00032          CLRQ    -(SP)                                       ;
                 7E      0200       8F    3C 00034          MOVZWL  #512, -(SP)                                 ;
                                    53    DD 00039          PUSHL   R3                                          ;
                                    7E    7C 0003B          CLRQ    -(SP)                                       ;
                           BA       A3    9F 0003D          PUSHAB  QIOSB                                       ;
                                    31    DD 00040          PUSHL   #49                                         ;
                                    64    DD 00042          PUSHL   LINK_CHAN                                   ;
                                    7E    D4 00044          CLRL    -(SP)                                       ;
          00000000G 00              0C    FB 00046          CALLS   #12, SYS$QIOW                               ;
                    52              50    D0 0004D          MOVL    R0, STATUS                                  ;
                    04              52    E9 00050          BLBC    STATUS, 2$                                  ; 1577
                    52     BA       A3    3C 00053          MOVZWL  QIOSB, STATUS                               ; 1578
                    03              52    E8 00057 2$:      BLBS    STATUS, 3$                                  ; 1579
```

```
                      00A8 31 0005A         BRW      12$                                ;
                    04  AC DD 0005D 3$:     PUSHL    OUT_DESC                           ; 1581
                        53 DD 00060         PUSHL    R3                                 ;
                    BC  A3 9F 00062         PUSHAB   QIOSB+2                            ;
00000000G 00            03 FB 00065         CALLS    #3, LIB$SCOPY_R_DX                 ;
          50            01 D0 0006C         MOVL     #1, R0                             ; 1587
                        04 0006F            RET                                         ;
          50        04  A4 D0 00070 4$:     MOVL     LINK_TFRADR, R0                    ;
                    04  AC DD 00074         PUSHL    OUT_DESC                           ;
                    08  AC DD 00077         PUSHL    PROMPT_DESC                        ;
                    08  A4 9F 0007A         PUSHAB   LINK_CONTEXT                       ;
          60            03 FB 0007D         CALLS    #3, (R0)                           ;
                        04 00080            RET                                         ; 1589
                        5E DD 00081 5$:     PUSHL    SP                                 ; 1593
          7E        04  AC 7D 00083         MOVQ     OUT_DESC, -(SP)                    ; 1595
             00000000G  00 9F 00087         PUSHAB   MAIL$L_SMG_KEYTABLE                ; 1593
             00000000G  00 9F 0008D         PUSHAB   MAIL$L_SMG_KEYBOARD                ;
00000000G 00            05 FB 00093         CALLS    #5, SMG$READ_COMPOSED_LINE         ;
          52            50 D0 0009A         MOVL     R0, STATUS                         ;
00000000G 8F            52 D1 0009D         CMPL     STATUS, #SMG$_EOF                  ; 1596
                        07 12 000A4         BNEQ     6$                                 ;
          52 0001827A   8F D0 000A6         MOVL     #98938, STATUS                     ; 1597
000181B8  8F            52 D1 000AD 6$:     CMPL     STATUS, #98744                     ; 1598
                        09 13 000B4         BEQL     7$                                 ;
00000838  8F            52 D1 000B6         CMPL     STATUS, #2104                      ; 1599
                        03 12 000BD         BNEQ     8$                                 ;
          52            01 D0 000BF 7$:     MOVL     #1, STATUS                         ; 1600
          0B        01  A5 E9 000C2 8$:     BLBC     MAIL$GL_FLAGS+1, 9$                ; 1601
          52 0001827A   8F D0 000C6         MOVL     #98938, STATUS                     ; 1602
       01 A5            01 8A 000CD         BICB2    #1, MAIL$GL_FLAGS+1                ; 1603
          03            6C 91 000D1 9$:     CMPB     (AP), #3                           ; 1604
                        0C 1F 000D4         BLSSU    10$                                ;
                    0C  AC D5 000D6         TSTL     12(AP)                             ;
                        07 13 000D9         BEQL     10$                                ;
          07            52 E9 000DB         BLBC     STATUS, 11$                        ; 1605
       0C BC            6E B0 000DE         MOVW     TEMPLEN, @OUTLEN                   ; 1606
          20            52 E8 000E2 10$:    BLBS     STATUS, 12$                        ; 1607
0001827A  8F            52 D1 000E5 11$:    CMPL     STATUS, #98938                     ; 1608
                        17 13 000EC         BEQL     12$                                ;
                        52 DD 000EE         PUSHL    STATUS                             ; 1609
             00000000G  00 9F 000F0         PUSHAB   MAIL$Q_INPTRAN                     ;
                        01 DD 000F6         PUSHL    #1                                 ;
             007E10B2   8F DD 000F8         PUSHL    #8261810                           ;
00000000G 00            04 FB 000FE         CALLS    #4, LIB$SIGNAL                     ;
          50            52 D0 00105 12$:    MOVL     STATUS, R0                         ; 1610
                        04 00108            RET                                         ; 1613

; Routine Size:  265 bytes,    Routine Base:  $CODE$ + 0CA3
; 1492          1614  1 GLOBAL ROUTINE MAIL$PUT_OUTPUT(BUFDESC,FAOARGS) =
; 1493          1615  1 !++
; 1494          1616  1 ! FUNCTIONAL DESCRIPTION:
; 1495          1617  1 !
; 1496          1618  1 !       Write a record to sys$output (or sys$net if network server)
; 1497          1619  1 !
; 1498          1620  1 ! Inputs:
; 1499          1621  1 !
; 1500          1622  1 !       bufdesc = address of string to output or fao control string
; 1501          1623  1 !       faoargs = start of fao args if bufdesc is an fao control string
; 1502          1624  1 !               for fao strings which take no args, use a 0 for faoargs
; 1503          1625  1 !
; 1504          1626  1 ! If 2 or more arguments are passed, bufdesc is assumed to be an fao control
; 1505          1627  1 ! string, and is processed as such
; 1506          1628  1 !
; 1507          1629  1 !--
; 1508          1630  2 BEGIN
; 1509          1631  2 BUILTIN
; 1510          1632  2     ACTUALCOUNT;
; 1511          1633  2
; 1512          1634  2 LOCAL
; 1513          1635  2     TMPBUF : $BBLOCK[MAIL$K_INBUFFSZ],
; 1514          1636  2     STATUS,
; 1515          1637  2     QIOSB : VECTOR[4,WORD],
; 1516          1638  2     OUTDESC : REF $BBLOCK,
; 1517          1639  2     DESC : VECTOR[2,LONG];
; 1518          1640  2
; 1519          1641  2 OUTDESC = .BUFDESC;
; 1520          1642  2 IF ACTUALCOUNT() GEQU 2
; 1521          1643  3 THEN BEGIN
; 1522          1644  3     DESC[0] = MAIL$K_INBUFFSZ;
; 1523          1645  3     DESC[1] = TMPBUF;
; 1524        P 1646  3     $FAOL(CTRSTR=.OUTDESC,OUTLEN=DESC,
; 1525          1647  3         OUTBUF=DESC,PRMLST=FAOARGS);
; 1526          1648  3     OUTDESC = DESC;
; 1527          1649  2     END;
; 1528          1650  2 IF NOT .MAIL$GL_FLAGS[MAIF_V_NETJOB]
; 1529          1651  2 THEN RETURN LIB$PUT_OUTPUT(.OUTDESC)
; 1530          1652  3 ELSE BEGIN
; 1531          1653  3     IF .LINK_CHAN EQL 0
; 1532        P 1654  3         THEN IF_ERR(ACCEPT_LINK(),
; 1533          1655  3                         RETURN .STATUS);
; 1534          1656  3     IF NOT .MAIL$GL_FLAGS[MAIF_V_ALTP]
; 1535          1657  4     THEN BEGIN
; 1536        P 1658  4         STATUS = $QIOW(CHAN=.LINK_CHAN,
; 1537        P 1659  4                         FUNC=IO$_WRITEVBLK,
; 1538        P 1660  4                         IOSB=QIOSB,
; 1539        P 1661  4                         P1=.OUTDESC[DSC$A_POINTER],
; 1540          1662  4                         P2=.OUTDESC[DSC$W_LENGTH]);
; 1541          1663  4         IF .STATUS
; 1542          1664  4             THEN STATUS = .QIOSB[0];
; 1543          1665  4         RETURN .STATUS
; 1544          1666  4         END
; 1545          1667  3     ELSE RETURN (.LINK_TFRADR)(LINK_CONTEXT,LNK_C_IO_WRITE,.OUTDESC);
; 1546          1668  2     END;
; 1547          1669  1 END;
```

```
                           000C 00000        .ENTRY   MAIL$PUT_OUTPUT, Save R2,R3                    ; 1614
             53 00000000' 00 9E 00002        MOVAB    LINK_CHAN, R3                                  ;
             5E      FDF0 CE 9E 00009        MOVAB    -528(SP), SP                                   ;
             52        04 AC D0 0000E        MOVL     BUFDESC, OUTDESC                               ; 1641
             02           6C 91 00012        CMPB     (AP), #2                                       ; 1642
                          1F 1F 00015        BLSSU    1$                                             ;
             6E      0200 8F 3C 00017        MOVZWL   #512, DESC                                     ; 1644
          04 AE        10 AE 9E 0001C        MOVAB    TMPBUF, DESC+4                                 ; 1645
                       08 AC 9F 00021        PUSHAB   FAOARGS                                        ; 1647
                       04 AE 9F 00024        PUSHAB   DESC                                           ;
                       08 AE 9F 00027        PUSHAB   DESC                                           ;
                          52 DD 0002A        PUSHL    OUTDESC                                        ;
   00000000G 00           04 FB 0002C        CALLS    #4, SYS$FAOL                                   ;
             52           6E 9E 00033        MOVAB    DESC, OUTDESC                                  ; 1648
0A 00000000G 00           01 E0 00036 1$:    BBS      #1, MAIL$GL_FLAGS, 2$                          ; 1650
                          52 DD 0003E        PUSHL    OUTDESC                                        ; 1651
   00000000G 00           01 FB 00040        CALLS    #1, LIB$PUT_OUTPUT                             ;
                             04 00047        RET                                                     ; 1652
                          63 D5 00048 2$:    TSTL     LINK_CHAN                                      ; 1653
                          08 12 0004A        BNEQ     3$                                             ;
        FD5D CF           00 FB 0004C        CALLS    #0, ACCEPT_LINK                                ; 1655
             3A           50 E9 00051        BLBC     STATUS, 5$                                     ;
24 00000000G 00           02 E0 00054 3$:    BBS      #2, MAIL$GL_FLAGS+1, 4$                        ; 1656
                          7E 7C 0005C        CLRQ     -(SP)                                          ; 1662
                          7E 7C 0005E        CLRQ     -(SP)                                          ;
             7E           62 3C 00060        MOVZWL   (OUTDESC), -(SP)                               ;
                       04 A2 DD 00063        PUSHL    4(OUTDESC)                                     ;
                          7E 7C 00066        CLRQ     -(SP)                                          ;
                       28 AE 9F 00068        PUSHAB   QIOSB                                          ;
                          30 DD 0006B        PUSHL    #48                                            ;
                          63 DD 0006D        PUSHL    LINK_CHAN                                      ;
                          7E D4 0006F        CLRL     -(SP)                                          ;
   00000000G 00           0C FB 00071        CALLS    #12, SYS$QIOW                                  ;
             13           50 E9 00078        BLBC     STATUS, 5$                                     ; 1663
             50        08 AE 3C 0007B        MOVZWL   QIOSB, STATUS                                  ; 1664
                             04 0007F        RET                                                     ; 1667
             50        04 A3 D0 00080 4$:    MOVL     LINK_TFRADR, R0                                ;
                          52 DD 00084        PUSHL    OUTDESC                                        ;
                          0F DD 00086        PUSHL    #15                                            ;
                       08 A3 9F 00088        PUSHAB   LINK_CONTEXT                                   ;
             60           03 FB 0008B        CALLS    #3, (R0)                                       ;
                             04 0008E 5$:    RET                                                     ; 1669

; Routine Size:  143 bytes,    Routine Base:  $CODE$ + 0DAC
; 1549          1670  0 END ELUDOM



                                                                        .EXTRN  LIB$SIGNAL, SYS$UNWIND

;                                        PSECT SUMMARY
;
;       Name                            Bytes                          Attributes
;
;   $OWN$                                   16  NOVEC,  WRT,  RD ,NOEXE,NOSHR,  LCL,  REL,  CON,NOPIC,ALIGN(2)
;   $GLOBAL$                                 8  NOVEC,  WRT,  RD ,NOEXE,NOSHR,  LCL,  REL,  CON,NOPIC,ALIGN(2)
;   $CODE$                                3643  NOVEC,NOWRT,  RD ,  EXE,NOSHR,  LCL,  REL,  CON,NOPIC,ALIGN(2)




;                                 Library Statistics
;
;                                                  -------- Symbols --------        Pages        Processing
;       File                                       Total    Loaded   Percent      Mapped       Time
;
;   _$255$DUA28:[SYSLIB]STARLET.L32;1               9776        74         0         581          00:00.8
;   _$255$DUA28:[MAIL.OBJ]MAILDEF.L32;1              457        71        15          26          00:00.2





;                                          COMMAND QUALIFIERS

;       BLISS/CHECK=(FIELD,INITIAL,OPTIMIZE)/LIS=LIS$:NETSUBS/OBJ=OBJ$:NETSUBS MSRC$:NETSUBS/UPDATE=(ENH$:NETSUBS)

; Size:           3466 code + 201 data bytes
; Run Time:          00:42.5
; Elapsed Time:      02:41.0
; Lines/CPU Min:       2357
; Lexemes/CPU-Min: 36069
; Memory Used:  225 pages
; Compilation Complete
```

0230 AH-BT13A-SE
VAX/VMS V4.0

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